

ABSTRACT

Title of Dissertation: SELF-REGULATED STRATEGY DEVELOPMENT AND GENERALIZATION INSTRUCTION: EFFECTS ON STORY WRITING AMONG SECOND AND THIRD GRADE STUDENTS WITH EMOTIONAL AND BEHAVIORAL DISORDERS

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The effects of a self-regulated strategy intervention with three second and third grade students identified with emotional and behavioral disorders (EBD) in the area of story writing with an additional focus on the effects of generalization instruction to personal narrative was assessed in this study. Each participant was individually trained to use the W-W-W, What =2, HOW = 2, story writing strategy and self-regulation procedures to write stories that were longer, contained more essential elements, and were of overall better quality. They developed personal self-statements to facilitate strategy usage as well as defuse individual frustration levels with the writing process. Instruction was criterion based.

A multiple baseline across participants design with multiple probes in baseline only was employed. The effects of the intervention on participants' ability to write stories were measured at baseline, post-instruction and maintenance. In a addition, a generalization measure was administered at baseline and post-instruction to assess if the effects of the intervention would transfer to an additional genre (personal narrative).

Other dependent measures utilized were a self-efficacy scale and social validity information.

Results indicated that participants' story writing ability improved meaningfully at post-instruction and maintenance compared to baseline. Participants wrote stories that were longer, contained more essential elements, and were of overall better quality. In addition, they generalized these effects to an additional genre, personal narrative, by writing personal narratives that were longer, contained more essential elements, and were of overall better quality at post-instruction compared to personal narratives written during baseline. Self efficacy on both factors improved with the exception of one participant. All three participants reported the strategies to be useful and valued their impact on their writing.

SELF-REGULATED STRATEGY DEVELOPMENT
AND GENERALIZATION INSTRUCTION:
EFFECTS ON STORY WRITING AMONG SECOND AND THIRD GRADE
STUDENTS WITH EMOTIONAL AND BEHAVIORAL DISORDERS

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Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2005

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Chapter 1

Introduction

In a personal essay published in 1972, James Kauffman wrote, “In our society, failure at school is tantamount to failure as a person, while school success enhances self-esteem and self-growth” (p.278). Children with emotional and behavioral disorders (EBD) are perhaps the most difficult group of students to educate in today’s schools. While it is unclear whether their educational disabilities are a product of their behavior or the reason for them, these behaviors violate the standards deemed acceptable to their lives in schools (Kauffman, 1997).

According to results presented by the National Longitudinal Transition Study -2 (NLTS-2), students with EBD represent approximately 8% of the population of students with disabilities. Eighty percent of elementary and middle school students classified as EBD are male with nearly as many in secondary settings (75.6%). Across all ages, students identified as EBD are disproportionately African American, placed in more restrictive settings and receive services later than students with other disabilities (Bradley, Henderson, & Monfore, 2004).

Students are identified as EBD under the definition specified by the Individuals with Disabilities Act (IDEA) amended in 1997, where emotional disturbance is defined as

a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree which adversely affects school performance: (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory relationships with peers or teachers; (c) in appropriate types of behavior or feelings under normal circumstances; (d) a

general pervasive mood of unhappiness or depression; (e) a tendency to develop physical symptoms or fears associated with personal or school problems. The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance. (*Federal Register*, 1999, p. 12422)

NLTS data were collected from 1987-1993 through the Office of Special Education Programs. The NLTS included more than 8,000 students with disabilities from 300 school districts nationwide and compared students across a variety of disability categories including; students with learning disabilities, emotional disturbance, speech impairments, mental retardation, visual impairment, hearing impairment, orthopedic impairment, other health impairment, or multiple disabilities. Students identified as EBD made up 800 of the 8,000 participants (Wagner, Kutash, Duchnowski, & Epstein, 2005).

Data reported in the first National Longitudinal Transition Study (NLTS) indicated overall academic outcomes for students with EBD are dismal. When compared to other students with disabilities, students with EBD obtained lower grade point averages than any other group. Three fourths of students with EBD failed more than one grade and their drop out rates were twice as large as students in general education (Wagner, Kutash, Duchnowski, & Epstein, 2005). In addition to poor grade point averages, results of the first NLTS indicated at least 50% of students with EBD had failed one or more courses and more than 66% failed the competency exam for their grade level (Gunter & Denny, 1998).

Similar conclusions have been drawn from studies on a smaller scale. Nelson, Benner, Lane, and Smith (2004) conducted a cross-sectional study with a random sample

of 155 K-12 students with EBD. They reported that students with EBD experience significant academic deficits across all content areas. In their analysis, 83% of students with EBD scored below the mean of the norm group across content areas.

Results from large scale studies such as the NLTS and smaller studies like Nelson et al. (2004) are even more alarming when coupled with legislation such as the No Child Left Behind Act of 2001 (2002) and the requirement of students with EBD to participate in statewide assessments as outlined in the reauthorization of IDEA (Wehby, Lane, & Falk, 2003). Accountability provisions outlined in IDEA and No Child Left Behind assume instruction and outcomes for students with disabilities will improve based on the assertion that if schools are held accountable based on test performance then students with disabilities will perform better (Ysseldyke & Nelson, 2004). As the academic demands placed on students increase, the need for academic interventions that are more successful for students with EBD is essential.

Academic Deficits of EBD Students

The academic deficits experienced by students with EBD and their poor behavior are highly correlated (Reid, Gonzalez, Nordness, Trout, & Epstein, 2004). However, a causal relationship between behavioral problems and academic achievement has yet to be determined (Reid et al., 2004). Until most recently, very little consideration had been dedicated to academic issues for students with EBD (Lane, 2004). Several reasons have been proposed in explanation.

First, negative teacher/student interactions in self-contained EBD classrooms deter teachers from working on academic issues (Wehby, Lane, & Falk, 2003; Lane, 2004). Students with EBD are thought to have a negative influence on teacher behavior that

causes poor instruction (Wehby et al., 2003). High rates of reprimands versus low rates of praise and positive reinforcement have been found in EBD classrooms (Wehby, Symons, & Shores, 1995).

The second reason, and possibly the most prevalent, is most teachers feel that student behavior must be under control before learning can take place (Lane, 2004; Wehby, Lane, & Falk, 2003). Behavior problems of students with EBD are so severe that they keep teachers from implementing high quality instruction (Wehby et al., 2003). Teachers feel they spend more time attempting to get students under control and ready to learn than on instruction. Wehby et al. (2003) reported only 30% of the school day is dedicated to academic instruction in self-contained EBD classrooms. Fear that students who do not reach an acceptable level of social behavior will be left without direct instruction in key subjects is very real (Gunter, 2003).

Third, it appears teacher preparation programs tend to target the social and behavioral characteristics of students with EBD rather than academic characteristics (Wehby et al., 2003; Lane, 2004). Lack of teacher training for preservice EBD teachers in the area of academics has left many young and inexperienced EBD teachers without the support of instructional techniques that are effective for the demanding population they instruct. Teachers need to know “academic failure is one of the most powerful predictors of problem behavior and social behavior” (Reid et al., 2004). Conversely, academic achievement is correlated with a decrease in adverse behavior (Reid et al., 2004).

Finally, a paucity of empirical research in the area of academic instruction for EBD students has left teachers with a limited knowledge base to access for help (Wehby et al., 2003). In a comprehensive review of the literature, Mooney et al. (2003) identified only

55 academic intervention studies conducted since 1975 with students with EBD. This averages out to about two studies per year. Since 1996, the average has dropped to one academic intervention study per year (Mooney et al., 2003). Until the focus on academic needs of students with EBD is seriously addressed by current researchers, the increased demands on these students will not be met, leaving them even further behind.

Difficulties with Writing

One academic area of particular concern is writing. Writing has rarely been studied in connection to students with EBD, although it is essential to the success of all students in school. While writing is critical to the academic success of students with EBD it could also serve as a significant expressive skill (Lane, 2004). Studies conducted with EBD students in the past, in the area of writing put little emphasis on the act of composing. The primary focus has been on spelling, punctuation, or simple paragraph writing. The current study took a more sophisticated approach to teaching students how to write. Participants in the current study used procedures such as goal setting, self-monitoring, self-instructions, and self-reinforcement to regulate their use of the strategy and their behavior. In addition, the current study incorporated effective teaching practices such as scaffolding instruction, modeling, and explicitly teaching participants how to plan and write a story.

Writing is the primary way in which students demonstrate their knowledge, and the most common means used by teachers to evaluate performance in both the classroom and on statewide assessments (Graham & Harris, 1988). However, writing is a difficult task for the majority of students. Writing requires a substantial amount of self-regulation and effort (Graham, Harris, & Troia, 1998). Skill in writing depends on many components

including the author's ability to plan as well as manage the writing process (De La Paz & Graham, 1997). In order to improve the writing performance of struggling writers, empirically validated strategies need to be put into practice.

Students Who Struggle with Writing

Results of the National Writing Commission on Writing (2003) indicated “three out of every four 4th, 8th, and 12th grade students demonstrated only partial mastery of the writing skills and knowledge needed at their respective grade level” (p.3). Children who struggle with writing not only lack specific knowledge about the writing process but they also are deficient in the “higher level cognitive processes thought to underlie effective writing” (Graham, Schwartz, & MacArthur, 1993, p. 237). Writing is a difficult task that requires the writer to “negotiate rules and mechanics while maintaining a focus on the overall organization, form and features, purposes and goals, and audience needs and perspectives” (Harris, Graham, Mason, & Saddler, 2002, p. 110). Therefore, students who are unable to self-regulate this complex process produce essays that are less polished, less expansive, and less coherent than their normally achieving peers (Graham et al., 1993). They simply tell what they know about a topic without giving much thought to planning, audience, topic, organization, or goals (Harris et al., 2002). In addition, students develop a negative attitude about writing and themselves as writers (Harris & Graham, 1999).

In the following section self-regulation and its relationship to skilled writing will be introduced. Self-Regulated Strategy Development (SRSD), an empirically validated strategies instruction model used to improve students' strategic behaviors across many

content areas, will be described and its theoretical basis overviewed. Finally, a rationale for using SRSD in the area of writing with students with EBD will be proposed.

Self-Regulation

An important goal for students with EBD is to become self-regulated (Hallahan & Kauffman, 1984; Kauffman, 1992; Kirk & Gallagher, 1989; Pierce & Epling, 1995). Students who are self-regulated are active participants in their learning. Rather than relying solely on teachers, parents, or other external change agents to impart knowledge, these students take an active role in their own learning (Zimmerman, 1989). Teachers describe students who exhibit self-regulated behavior as self-starters with incredible persistence on instructional tasks; capable in prevailing over problems; and “self-reactive to task performance outcomes” (Zimmerman, 1994, p. 5).

In contrast, students who lack self-regulation frequently are described as low achievers (Zimmerman, 1994). According to Zimmerman, low achievers typically exhibit more impulsive behavior, set lower academic goals, and are not as accurate in assessing their abilities (1994). In addition, they tend to be more self-critical, less successful, and give up more easily than achievers (1994). Such deficiencies in self-regulatory behaviors have considerable effects on students’ emotional well being. They suffer from low self-esteem and are less intrinsically motivated than achievers (Zimmerman, 1994).

Self-Regulated Strategy Development

One empirically validated instructional model successfully utilized with struggling writers is Harris and Graham’s (1996) Self-Regulated Strategy Development (SRSD) model. It has been used to improve students’ strategic behaviors, self-regulation

skills, content knowledge, and motivational dispositions (Graham & Harris, 2003). The use of self-regulatory procedures such as goal-setting, self-monitoring, and self-evaluation embedded within the writing process, have helped students accomplish the challenging task of composing.

Four major theoretical and empirical sources provided the initial foundation for the SRSD model. This theoretically integrative approach was influenced by Michenbaum's (1977) cognitive-behavioral intervention model; Vygotsky's (1978) theory of the social origin of self-control and development of mind; Deschler and Schumaker's (1982) research on the support of acquisition techniques for strategies among adolescents with LD; and Brown, Campione (1981), and their colleagues' theoretical and empirical work on development of self-control, metacognition, and strategies instruction (Swanson, Harris, & Graham, 2003). SRSD is meant to strengthen students' strategic behaviors, self-regulation skills, content knowledge, and motivation (Harris & Graham, 1996). SRSD, within the writing process framework, aims to help students independently manage the stages of the writing process through the careful development and application of powerful instructional goals, components, characteristics, and procedures. Planning, production, revising, and editing are coupled with teaching students to monitor and self-regulate the entire process. Teachers not only bring these two seemingly difficult tasks together, but they also help students develop better attitudes toward writing and view themselves as proficient writers (Harris & Graham, 1996).

SRSD has been successfully employed in over 30 studies with students with learning disabilities (LD), normally achieving students, and students who struggle with writing (Graham & Harris, 2003). Using SRSD in writing has had positive effects on the length,

structure, and quality of students' writing. However, the effects of SRSD on the writing of students with EBD who are poor writers have never been studied. The study described here examined the effects of (SRSD) on story writing among second and third grade students with EBD who struggle with writing.

The SRSD model appears to be a good fit for students with EBD. Students identified as EBD do not necessarily learn differently from their peers; however, the behavior and emotional problems they experience interfere with learning. SRSD addresses the affective, behavioral, and cognitive needs of students who experience trouble with learning (Harris & Graham, 1996). Earlier in the introduction, four reasons were proposed to explain the lack of focus on academics for students with EBD. The SRSD model addresses each of these problems.

First, SRSD emphasizes a collaborative process between student and teacher. The teacher scaffolds instruction, giving the student more independence as he or she becomes more proficient. Students are regarded as active participants in their learning. In addition, SRSD encourages the use of positive reinforcement by the teacher and the student. Students learn to use self-talk to help them cope with difficult tasks as well as praise themselves for a job well done. Teachers give specific positive feedback and model how to use the self-regulation procedures, including positive self-talk. Use of SRSD could lead to a decrease in reprimands and an increase in praise in EBD classrooms. SRSD addresses a student's affect and aims to help students to perceive themselves as better writers.

Second, SRSD does not assume a student's behavior must be under control before instruction takes place. Students work on managing their behavior through the use of self-

regulation techniques as they simultaneously work on becoming better writers. While the effects of SRSD have not been proven to reduce the types of severe behaviors experienced by students with EBD, instruction in SRSD does not wait for behaviors to be extinguished to begin.

Finally, SRSD addresses lack of teacher training in academic areas for EBD teachers and the paucity of research-based academic interventions for EBD students. If SRSD is effective in the area of writing for students with EBD it will give teachers of EBD a valuable tool to address the academic needs of their students. Significant results could lead to the replication of results with larger groups of students with EBD.

In addition to the previously noted reasons, SRSD targets aspects of motivation such as self-efficacy (Graham & Harris, 2003). Some students with EBD experience such high rates of failure in school they often no longer have the desire to make an effort to complete tasks (Jones, Dohrn, & Dunn, 2004). SRSD aims to increase student motivation by appealing to the intrinsic value a student places on learning a strategy. Teachers who use SRSD in the area of writing explain and model for students how learning the strategy will improve their writing. They emphasize students' role as collaborators and teach students to monitor and evaluate the effects of the strategy (Graham & Harris, 2003).

Empirical support for the use of self-regulation procedures is evident in EBD literature. In a literature review of self-management outcomes, Nelson, Smith, Young, and Dodd (1991) found self regulation strategies to be highly effective for students with EBD. In addition, a review of self-regulated learning interventions targeting academic outcomes for students with emotional and behavioral disorders revealed self-monitoring, self-instruction, goal setting, self-evaluation, self-reinforcement, and strategy instruction

as effective treatments for students with EBD (Mooney, Denny, & Gunter, 2004). Both of these reviews will be described in greater detail in Chapter 2.

Purpose of the Study

The impact of Self-Regulated Strategy Development (SRSD) with explicit generalization instruction on story writing of second and third grade students with EBD who struggled with writing was assessed in the current study. This was the first time the effects of SRSD in writing with students identified as EBD was examined. The current study extended the large body of work conducted by Harris and Graham (2003) using SRSD in writing with students with LD and low achievers. Harris and Graham's (2003) meta-analysis of SRSD intervention studies indicated a few students with EBD have been included in SRSD interventions in the past; however, the data analysis was by group. Using single case design in the current study allowed for individual analysis of students identified as EBD. Three students from one self-contained EBD classroom were selected to participate in the study.

Instruction in story writing using SRSD followed the six steps outlined in Harris and Graham's (1996) SRSD instructional model: develop and activate background knowledge, discuss the strategy, model the strategy, memorize the strategy, support the strategy, and independent performance. Self-regulation procedures (self-monitoring, goal setting, self-reinforcement, and self-instruction) were embedded throughout instruction. Participants learned how to use the following two strategies to help them compose stories that were longer, contained more essential elements, and were of overall better quality (see Figures 1 and 2). SRSD instruction in writing continued with participants until criterion was met. Criterion performance was defined as when a participant could

independently write a story, with all seven parts, using self-regulation techniques and the W-W-W, What = 2, How = 2 strategy without any prompts (chart with strategy steps, graphic organizer, or self-statement sheet).

Figure 1: POW. A three-step framework for planning and writing was used to structure the writing process before, during, and after writing.

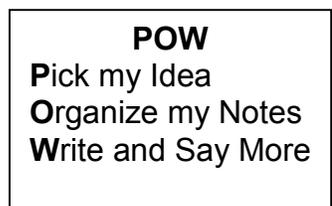
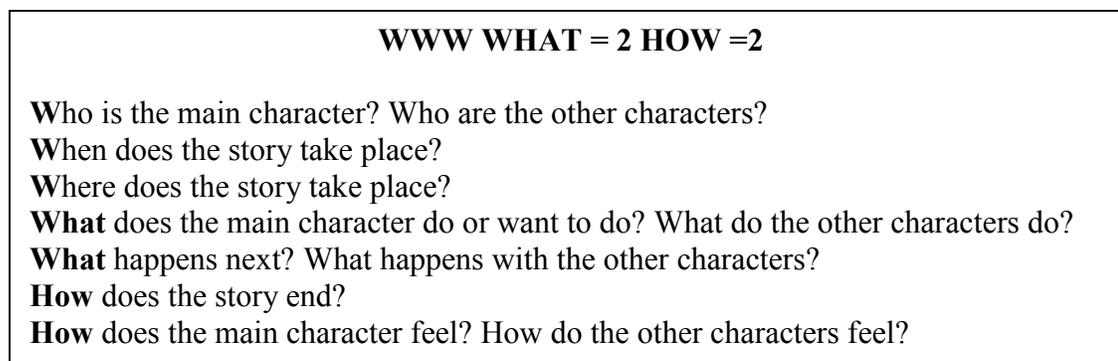


Figure 2: WWW What = 2 How = 2. The story writing mnemonic used to help participants generate ideas for the 7 basic parts of a story.



The independent variable was instruction in story writing using SRSD, with instructional components designed to support generalization to other types of writing. Generalization was measured by assessing participants' abilities to write personal narratives using the strategies. Maintenance of the strategy was measured two weeks after each student met criterion. In addition, self-efficacy was measured prior to the beginning of instruction and immediately following instruction. The tasks and materials used, measures, sampling, and general procedures are examined in greater detail in Chapter 3.

The following research questions were addressed in the study.

1. Does SRSD instruction with explicit generalization training improve the quality of stories written by students identified as EBD who are poor writers, immediately following instruction and at maintenance?
2. Does SRSD instruction with explicit generalization training increase the length of stories written by students identified as EBD who are poor writers, immediately following instruction and at maintenance?
3. Does SRSD instruction with explicit generalization training improve the number of essential elements included in stories written by students identified as EBD who are poor writers, immediately following instruction and at maintenance?
4. Does SRSD instruction with explicit generalization training improve the writing self-efficacy of students identified as EBD who are poor writers, immediately following instruction and at maintenance?
5. Does SRSD instruction with explicit generalization training improve the quality of personal narratives, composed during a generalization probe, of students identified as EBD who are poor writers, immediately following instruction and at maintenance?
6. Does SRSD instruction with explicit generalization training increase the length of a generalization probe of personal narrative writing by students identified as EBD who are poor writers, immediately following instruction and at maintenance?
7. Does SRSD instruction with explicit generalization training improve the number of essential elements included in the personal narrative generalization probe written by students identified as EBD who are poor writers, immediately following instruction and at maintenance?

8. Do students with EBD consider the SRSD procedures to be usable and socially valid?

Definition of Terms

EBD students. Many terms are used to describe emotional, behavioral or mental disorders. For the current proposal, students with EBD will identified for the study using the Federal definition and their identification by the school system. Students are categorized as having a serious emotional disturbance, which is defined under the Individuals with Disabilities Education Act (IDEA), Public Law 101-476, as follows: "...a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects educational performance—

- (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors;
- (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
- (C) Inappropriate types of behavior or feelings under normal circumstances;
- (D) A general pervasive mood of unhappiness or depression; or
- (E) A tendency to develop physical symptoms or fears associated with personal or school problems."

As defined by the IDEA, serious emotional disturbance includes schizophrenia but does not apply to children who are socially maladjusted, unless it is determined that they have a serious emotional disturbance. [Code of Federal Regulation, Title 34, Section 300.7(b)(9)] Due to the ambiguous nature of the definition, (Forness & Kavale, 2000;

Kauffman, 1993) a detailed description of each participant's identification process will be provided so that results of the study may be generalized to other students with EBD.

Students with EBD who struggle with writing. Second and third grade students with EBD were identified for the study based on three criteria. First, participants who scored one standard deviation below the mean on the Story Construction Subtest of the Test of Written Language (TOWL -3; Hammill & Larsen, 1996) were considered. This subtest measured a child's ability to write a complete and interesting story. Second, participants were recommended by their classroom teacher as someone who would benefit from additional instruction in writing based on classroom performance. Third, all participants had individualized education plan (IEP) goals in the area of writing.

SRSD. Lessons incorporated all six stages of SRSD for strategy acquisition: develop background knowledge, discuss the strategy, model the strategy, memorize the strategy, support the students' use of the strategy, and independent performance. SRSD also incorporates explicit instruction in the self-regulatory process of goal setting, self-instructions, monitoring performance, and self-reinforcement. Finally, it addresses students' motivation and affect.

Criterion performance. The design of the proposed study allows for every participant to be instructed until criterion performance has been established. Criterion performance was defined as when a participant could independently write a story, with all seven parts, using self-regulation techniques and the W-W-W, What = 2, How = 2 strategy without any prompts (chart with strategy steps, graphic organizer, or self-statement sheet).

Summary

The academic deficits of students with EBD were described in this chapter. In addition, the significance of instruction in story writing strategies and self-regulation procedures was established. A brief introduction to SRSD and its relationship to skilled writing were also provided. Finally, justification for using SRSD in the area of writing with students with EBD was proposed.

In Chapter 2, a rationale for conducting academic intervention research in the area of writing with EBD students using SRSD will be established through a review of the research literature. Evidence of the success of SRSD with students who struggle with writing will be presented as justification for using SRSD with students with EBD. Chapter 3 includes a description of the methodology and procedures of the current study. The results of the current study will be presented in Chapter 4. Discussion of the results, limitations of the study, implications for practice, and implications for research will be discussed in Chapter 5.

Chapter 2

Introduction to the Review of Literature

The lives of students with emotional and behavioral disorders (EBD) have greatly improved over the last thirty years. Students with EBD are now guaranteed a free and appropriate public education and are provided with the protection of due process when disciplinary actions are justified (Scheuermann & Johns, 2002). In addition, a large base of research has been established describing the powerful methods for the prevention and management of complex behaviors. However, a similar research base in the area of academic interventions for EBD students is virtually nonexistent (Kauffman & Wong, 1991; Ruhl & Berlinghoff, 1992). This is of serious concern considering the magnitude of the academic deficits experienced by students with EBD.

Organization of the Literature Review

In this chapter, a review of research on the current status of academic interventions for students identified as EBD is presented first. This review served two important purposes to the current study. First, it established the need for academic interventions in the area of writing for students with EBD. Secondly, it helped to establish sound procedures in the current study that have been absent in much of the past literature.

Following the comprehensive review of research on academic interventions for EBD students, a description of influential writing models over the last twenty years will be described. Writing interventions attempted with EBD students will be examined next. Due to the scarcity of actual interventions conducted in the area of writing with EBD

students, a review of successful writing interventions with struggling writers will then be presented. These studies provided a framework for the current proposal.

In addition to literature focusing on writing interventions for EBD students and struggling writers, careful attention was given to studies with instruction in self-regulation procedures. Self-regulation procedures were considered a key component of the current study and support for their use with students with EBD will be provided by reviewing several studies. Support for the use of interventions that have been successful with students identified as LD, with EBD students, will also be established.

Academic Interventions and EBD Students

Considering the enormity of academic problems experienced by students with EBD, it is troubling that so few empirically based academic intervention studies for these students exists (Gunter & Denny, 1998; Wehby, Lane, & Falk, 2003; Nelson, Benner, Lane, & Smith, 2004). In the following section, support for more academic intervention research will be highlighted by three comprehensive reviews of academic interventions encompassing the years 1961-2002. Reviews that focused solely on middle and secondary students were not reviewed. In addition, two meta-analyses of academic interventions encompassing the years 1961-2000 will be presented. One of the meta-analyses reviewed both classroom behaviors and academic performance. Analysis of these reviews informed the current academic intervention in the area of writing with students with EBD.

Narrative Reviews

Three narrative reviews of academic interventions with EBD students will be summarized in order to get an accurate portrait of the current status and trends of

academic research with EBD students (Ruhl & Berlinghoff, 1992; Trout, Nordness, Pierce, & Epstein, 2003; Mooney, Epstein, Reid, & Nelson, 2003). Authors of all three reviews set out to find ways to improve the educational outcomes of students with EBD through comprehensive review of the literature. While many weaknesses were reported by the reviewers in this body of literature, the identification of such weaknesses helps to inform future researchers of ways to improve the academic outcomes of students with EBD. A brief description of the procedures for each review will be described followed by an examination of participants, settings, design, dependent measures, treatment type, focus, and length, across the reviews.

Ruhl and Berlinghoff (1992). Ruhl and Berlinghoff's review encompassed the years 1976-1990. They identified 15 academic interventions studies conducted with students identified as EBD in grades kindergarten through 12, in public school settings only. Each study measured the effect of at least one independent variable on one or more dependent variables of an academic nature.

Trout, Nordness, Pierce, and Epstein (2003). Trout, Nordness, Pierce, and Epstein's review encompassed the years 1961-2000. They identified 65 studies that were broken into 70 data sets over four decades; 1961-1970; 1971-1980; 1981-1990; and 1991-2000. All articles reviewed, were published in a peer-reviewed journal; had a dependent variable that included achievement in at least one academic content area; and included participants between the ages of 5-21. A broad selection criteria of students identified as EBD resulted in a large pool of studies. Also, this study did not exclude participants identified as EBD using standardized behavior rating forms.

Mooney, Epstein, Reid, and Nelson (2003). Mooney et al. examined 55 academic intervention studies conducted with EBD students between the years of 1975-2003. Studies were included in their review if the following criteria were met: participants were between the ages of 5 and 21 who had verified emotional or behavioral challenges through IDEA or the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) or students were described as having emotional or behavioral problems and being served in a self-contained classroom for EBD students; participants' cognitive abilities measured in the average range; articles were peer reviewed and included manipulation of an independent or treatment variable; and treatment focused on an academic skill (p. 275). Studies were eliminated if participants only had a diagnosis of attention-hyperactivity disorder, autism, or pervasive developmental disorder; on-task performance was the only performance variable; and outcomes for EBD students were not separated from outcomes of other participants.

Participants. Mooney, Epstein, Reid, and Nelson's (2003) review of 55 academic intervention studies revealed an average of only 12.8 students with EBD included in academic research studies per year. Overall, participants were predominantly male and of 12 years of age and older. According to Mooney et al., the numbers of participants in research studies have been decreasing since the 1980's in spite of increasing numbers of students being identified as EBD. Between the years 1992-2002 students being served under the EBD label increased by 20% (Mooney et al., 2003).

In addition to small numbers of students with EBD being studied, lack of thorough participant description was also a weakness in the majority of these studies. These findings were consistent with reviews by Gunter and Denny, 1998; Ruhl and

Berlinghoff, 1992; and Skiba; Casey, 1985; and Trout et al., 2003 who each noted description of participants frequently absent or incomplete in research conducted with students with EBD. Trout et al. (2003) reported only 24 of 75 studies they reviewed reported data by race/ethnicity. Other significant weaknesses presented by Mooney et al. (2003) and Trout et al. (2003) included lack of female participants included in studies and failure to report data regarding SES. One serious ramification of failure to report thorough participant data is the inability to generalize the findings to students of diverse backgrounds. How can consumers of research literature apply sound interventions to similar types of students if they do not know who these participants represent? Second, it makes it impossible to conduct separate analysis of differences in the EBD population.

Failure to report SES data is especially critical in the area of EBD. According to Cullinan (2002), low SES can be a risk factor for EBD. Also, students from low SES backgrounds with EBD are more unlikely to persevere and benefit from interventions they participate in compared to students from middle and upper income backgrounds (Cullinan, 2002). Without knowledge of SES, researchers can not draw reliable conclusions about the data or even begin to expand our knowledge base of how race, gender, and SES may effect the social and academic lives of students with EBD in school.

Lack of studies including elementary age students is also a weakness. It appears that the majority of participants in EBD studies are secondary students (Mooney et al., 2003; Ruhl & Berlinghoff, 1992). Early identification and intervention with students with EBD could lead to better educational outcomes.

An additional weakness found in many of the studies reviewed was the identification criteria used to include students with EBD in academic research. Ruhl and Berlinghoff (1992) reported the most recurrent method for choosing study participants was previous school identification however, little or no attempts were evident in the procedures taken to verify that participants were accurately classified as EBD. It appears many researchers assumed participants to be identified as EBD based on their placement in a particular setting. Failure to verify student identification procedures makes it almost impossible to generalize the findings or determine if differences existed among participants.

One final consideration regarding participants is describing the cognitive abilities of participants. Ruhl and Berlinghoff (1992) found only 40% of studies they reviewed contained IQ information for all participants. This finding was consistent with Mooney et al. (2003) who reported that IQ was consistently not reported across the 55 studies they reviewed.

Mooney et al. (2003) suggested that if they were to summarize the major academic intervention findings from their review, it would be based on research conducted with a total of only 358 students. This statistic is startling considering the fact that since the passage of IDEA in 1975, students with EBD are a group that numbers in the millions (Mooney et al., 2003). Even more astonishing is the fact that in three of the last seven years studied (1996-2002), no students with EBD who met their criteria were involved in intervention research (Mooney et al., 2003).

Settings. Mooney et al. (2003) reported that of 58 settings described, 30 of the studies took place in special education classrooms. Twenty studies took place in

alternative classes such as residential or psychiatric facilities, and studies in general education settings were virtually non-existent. These findings were consistent with Dunlap and Childs (1996), who also reported that the majority of intervention studies take place in special education classrooms; primarily, self-contained settings. Mooney et al. (2003) explained this finding seems logical when one considers that most students with EBD are served in self-contained settings. However, as the number of students with EBD instructed in more inclusive settings increases, research in general education type settings also needs to increase.

An additional concern regarding setting is maintenance and generalization. Ruhl and Berlinghoff (1992) reported 71% of the studies they examined failed to report generalization data. Behavior change that only occurs in training settings has modest social significance (Ruhl & Berlinghoff, 1992). Data reported for maintenance had only slightly better outcomes. Ruhl and Berlinghoff (1992) reported only 40% of studies included maintenance data. An exceptional intervention is one that targets the behaviors of students in multiple settings and over extended periods of time.

Design. Single case designs have dominated the research base in the area of EBD since 1975 (Ruhl & Berlinghoff, 1992; Dunlop & Childs, 1996, Mooney et al., 2003). Mooney et al. (2003) reported that 80% of all research conducted with students with EBD since 1975 has been single case design and in the years between 1989 and 2002, that percentage grew to 95%. While most recognize single subject case design as powerful, in order that causal relationships can be further established and between-subject variation of intervention effects be explored, more experimental group design interventions need to be conducted (Mooney et al., 2003). However, due to the small numbers of students with

EBD available, single case design is a viable alternative. It allows a researcher to systematically apply a strategy to any given problem and measure its effects using experimental methods. While external validity of this design is compromised by lack of generalizability, this issue can be rectified through replication (Issac & Michael, 1995).

Dependent measures. Dependent measures used in academic intervention studies are of great interest to consumers of research because they are used to compare the needs of the participants in the study to the needs of the consumer. For example, a teacher looking for an empirically valid strategy for teaching reading comprehension for a student with EBD wants to know how he or she can measure the outcomes of the same strategy with a similar student. Detailed descriptions of dependent measures allows for practioners as well as other researchers to attempt replication of a study.

Mooney et al. (2003) reported accuracy and completion proportions have dominated curricular measures used to measure outcomes of intervention research with EBD students. A weakness of using such measures is they neglect to address fluency (Gunter & Denny, 1998). In addition, they fail to provide a significant benchmark to compare individual scores (Mooney et al., 2003).

Treatment type, focus, and length. Child mediated interventions dominated the research from 1989-1995 then dropped off significantly in the next seven years (Mooney et al., 2003). Peer mediated interventions were also reported to drop off even though programs such as PALS (Peer Assisted Learning Strategies) have had great success with students with EBD (Mooney et al., 2003). Combination strategies, peer and teacher mediated, were the least studied.

Seventy percent of the studies reviewed by Mooney et al. (2003) were in the area of reading and math. While reading and math are considered the most critical subjects taught by teachers, the studies lacked sophistication. Less than 20% focused on reading comprehension and less than 5% on mathematical reasoning and problem solving (Mooney et al., 2003). Research in the area of writing, language skills, science, and homework completion was virtually nonexistent (Mooney et al., 2003). Over the entire span of the review (1975-2002) only ten studies were conducted in the area of written expression. The total number of studies dropped significantly from five studies in the time span 1989-1995 to zero from 1996-2002.

According to Mooney et al. (2003), the average intervention for students with EBD lasted a total of 12 hrs over a course of 20 sessions. It is significant to note that the average number of sessions over the last two time periods. During the first time period (1975-1981) an average of 33 sessions was reported but this number dropped by nearly 50% in the 1996-2002 time period (17 sessions). Students with EBD are perhaps the most demanding group of students with disabilities to instruct and require systematic and intensive instruction (Mooney et al., 2003). Future interventions need to be more intensive or criterion based so that participants work at their own pace and are allowed the opportunity to master targeted behaviors.

Meta-analyses in Academic Interventions

Meta-analysis is a common review approach that utilizes statistical procedures to combine the results of independent studies (Skiba & Casey, 1985). Generally, results are reported using effect sizes. Meta-analysis is seen as advantageous as they provide results that are quantitative (Skiba & Casey, 1985). In addition, meta-analysis is considered

more systematic and explicit than narrative reviews (Reid et al., 2004). In the following section, two meta-analyses encompassing the years 1961-2000 (Skiba & Casey, 1985; Reid, Gonzalez, Nordness, Trout & Epstein, 2004) are reviewed. These two meta-analyses consolidate the knowledge base of effective academic interventions for EBD students and summarize important consideration for designing effective academic interventions.

Skiba and Casey. Skiba and Casey (1985) reviewed both classroom behaviors and academic performance outcomes for students with EBD in order to determine the most effective types of treatment for students with EBD. The authors decided to focus solely on research published after the passage of P.L. 94-142 due to serious flaws in the definition of EBD prior to 1975. The authors hoped to find the problem of definition remedied following P.L.94-142. The final review of research encompassed the years 1978-1983.

The criteria for inclusion in their review were: participants were school age (5-18); participants received some type of special programming or were identified as EBD; there was an experimental treatment implemented; results in the form of data were reported; participants were not identified as autistic or psychotic; participants were not simply identified as “behavior problems in the regular class”; and more than one participant was included in the study (Skiba & Casey, 1985, p. 241). Initially, 521 studies were identified. Only 41 studies met the final criteria. The majority of the studies (68.3%) targeted classroom behavior and only 24% focused on academic performance (Skiba & Casey, 1985).

The methodological flaws uncovered in their review were so numerous that the authors decided to code and report methodological characteristics in addition to quantitative methods. The interrater reliability coefficient for the coding methods was .81.

Results of their meta-analysis indicated serious problems in the quality of research despite findings of large average effect sizes. For example, the average effect size across all 41 studies was .93 indicating students with EBD scored almost one standard deviation above untreated controls on experimental treatments targeting classroom behaviors and academic performance (Skiba & Casey, 1985). Similarly, interventions targeting academic behavior exhibited a large average effect size (1.57). However, the validity of these findings was not strong due to enormity of methodological problems in the majority of studies (Skiba & Casey, 1985).

Reporting detailed descriptions of subjects, setting, and treatment variables is a basic requirement when reporting research results. However, in many of the studies reviewed, this information was either absent or not thorough. For example, nearly 25% of the studies failed to include information about the sex of the participants and only 50% included the ages of participants (Skiba & Casey, 1985). In 22% of the studies, the length of treatment was not reported.

An additional concern was the lack of maintenance and generalization measures within the majority of studies (Skiba & Casey, 1985). Of the 41 studies reviewed by Skiba and Casey, only 41% of group designs studies reported any attempt toward maintenance of the treatment (1985). Even less (33%) of researchers in single case design studies attempted to follow up with participants.

Perhaps the most disturbing error made by the majority of researchers was the lack of attention to treatment fidelity. Many of the studies failed to describe training procedures for implementing interventions and even fewer researchers reported a measure used to determine if the treatment was implemented correctly (Skiba & Casey, 1985).

Reid, Gonzalez, Nordness, Trout, and Epstein. Reid et al. (2004) review encompassed the years 1961-2000 and included 25 studies. The purpose of their analysis was to examine the extent of academic differences between students with EBD and their same-age nondisabled peers and norm groups. They examined possible differences in academic status across age, gender, race, and socioeconomic status. They also looked at possible differences in academics based on subject area, academic setting, and method of student identification as EBD.

Articles were included in the review based on four conditions. First, the study had to be published in a peer reviewed journal. Second, participants were identified as EBD by one of the following methods: by the school/ IDEA, DSM-IV; were being served in a program for EBD; or identified through the use of behavior rating scales. Third, the study included at least a mean score and standard deviation from a standardized test in at least one academic area so that effect sizes could be calculated. Finally, the study included children between the ages of 5 and 21 years of age (Reid et al., 2004).

Seventeen years after Skiba and Casey's review of 41 studies, Reid et al. identified fewer studies in their examination of the academic performance of students with EBD (25). One likely reason for the discrepancy in number of studies was Reid, Gonzalez, Nordness, Trout, and Epstein's selection criteria were more stringent. The greatest number of studies were eliminated because of their small sample sizes or the use of

grade equivalent scores (Reid et al., 2004). Skiba and Casey noted that one possible weakness of their review was the inclusion of studies with small sample sizes.

Although Reid et al. (2004) used more stringent criteria for the inclusion of studies in their meta-analysis, their findings were similar to the previously reviewed narrative studies as well as Skiba and Casey's (1985) meta-analysis. For example, problems with detailed descriptions of participants' gender, race, and SES were once again a serious concern.

The 25 studies included represented 2,486 students with EBD. The sample was predominately male; of an average age of 11.22; 69% Caucasian, 27% African American, 3% Hispanic, and 1% mixed race. Reid et al. (2004) felt it was difficult to say with great confidence that this body of participants were representative of the EBD population due to large number of authors who failed to thoroughly report participant characteristics. For example, almost 30% of authors failed to include information about the gender of the participants and not one study reported disaggregated data on female participants. As a result, Reid et al. (2004) were unable to test whether gender was a significant moderator of achievement.

In addition to lack of gender description, data on race and ethnicity were reported in less than half the studies reviewed. According to Reid et al. (2004), minority groups make up a significant portion of the overall population (25%) as well as the EBD population. African –Americans represent 27.3% and Hispanic groups represent 8.9% of the EBD population. Failure to include data on race and ethnicity is a serious omission (Reid et al., 2004).

Finally, Reid et al. (2004) reported SES data was frequently not included in the reviewed studies. As noted earlier, this is of serious concern based on the fact that low SES is a known risk factor for EBD (Cullinan, 2002).

A total of 101 effect sizes was generated by the review. A moderate to large overall effect size (-0.69) was reported for differences in the academic performance of students with EBD compared to their same age peers without disabilities (Reid et al., 2004). The majority of effect sizes (90) were negative, demonstrating that in “89% of the comparisons, students with EBD performed lower in academics than did nondisabled control or norm groups (Reid et al., 2004). The largest effect sizes were reported in math (-.81) and spelling (-.81) however, there were no significant differences reported between and among subject areas in regard to performance (Reid et al., 2004).

Based on the assumption that students identified as EBD placed in general education classroom settings would exhibit less severe behavior problems compared to students with EBD placed in self-contained settings, one might expect students with EBD served in the general education classroom to perform better academically than students in more restrictive settings (Reid et al., 2004). However, there were no significant differences in academic performance reported across general education, resource room, self-contained, and special school settings. It appears setting did not have a significant effect on the educational outcomes of students with EBD.

The reviewers also looked for possible effects age might have on the academic performance of students with EBD. Participants were divided into two age groups. Students older than twelve and younger than twelve comprised the two groups. For both age groups, students performed significantly lower than their same aged nondisabled

control or norm groups (Reid et al., 2004). However, no statistical differences between ages were found in the academic performance of students with EBD.

Finally, Reid et al. (2004) tested for effects due to method of identification as EBD. Four categories were developed: school identified, DSM-identified, rating scale identified, and described as receiving services for EBD. Students identified as EBD in all four categories performed significantly lower than their same-aged nondisabled control or norm groups. No significant differences were found between school-identified versus DSM-identified. However, rating scale identified participants differed significantly from school-identified, but not DSM-identified participants. The reviewers caution interpretation of this result based on the fact that in only two studies were rating scale identified participants included.

Based on the review conducted by Reid et al. (2004), it would appear that the academic performance of students with EBD is significantly lower than their nondisabled peers. However, the authors cautioned unquestioned interpretation of the overall degree of academic weaknesses of students with EBD based on two factors. First, no information on the precise timing of academic assessments and instructional programming was available (Reid et al., 2004) Significant differences could have existed between participants “whose data were taken at intake and those who had been previously identified and provided effective instructional programming for a period of time” (Reid et al., 2004, p.138). Second, no information about when students were identified as EBD was provided. Students who were identified and treated earlier may have performed significantly better than students who were identified later.

Conclusions

Based on the findings of the narrative and meta-analyses reviewed, several important points need to be made about future academic interventions with students with EBD. First, there simply needs to be more research targeted at academic achievement of students with EBD. The most critical areas of need include: reading comprehension, applied problem solving, mathematical reasoning, spelling, and composition. Second, detailed demographic data about the participants needs to be reported. Basic information regarding race, gender, SES, and cognitive abilities are critical to making inferences about generalization. Third, thorough reporting of treatment fidelity data needs to be provided in order to increase the overall validity and reliability of the findings. Finally, and perhaps the most significant, generalization and maintenance measures need to be included. Unfortunately, many researchers do not plan for effects across time and setting and rather just “hope” for them (Lane, Frankenberger, Lambnos, & Pierson, 2001). The review of academic literature for students with EBD sets the stage for developing sound methods and procedures in the current study.

In the next section, the area of writing is examined. A review of writing models is provided. In addition, two writing approaches that have dominated the classroom over the last twenty years (the process approach and strategy approach) are described. Finally, writing interventions that have been tried with students with EBD are reviewed.

Writing Process Models

While the history of writing dates back as far as 5,000 years ago when the Sumerians invented cuneiform as a method to record goods, the scientific study of writing can only be traced back about 100 years (Graham, in press). For the purposes of

the current study, models that have had a significant influence on the advancement of writing development over the last 20 years will be described.

Hayes & Flower Model

Hayes and Flower's (1980) study of writing has been described as the most influential in the last 25 years (Graham, in press). Observations of participants composing using "think alouds" led them to develop a model of skilled writing that is evident in the current models of writing.

Basic components. Hayes and Flower's (1980) model of writing identified three cognitive processes under the writer's control. The first component, *task environment*, included factors external to the writer such as topic, audience, and motivating cues. Second, they described the mental operations used during writing as *cognitive processes*. Such processes might be deciding what to say and how to say it, putting a writing plan into text, and reviewing what has been previously written to make changes (Graham, in press). During planning a writer sets goals, constructs ideas, and manages ideas into a plan (Hayes and Flower, 1980). Each of these processes is thought to be under the direct control of the writer and each process could interrupt or incorporate any other process. For example, a writer may generate a new goal during the act of revising. Writing is not considered a linear process. The final component, *writer's long term memory*, refers to the writer's knowledge about the topic, audience, and plan for completing the writing task (Graham, in press).

Goal directed. For adults as well as children, writing requires a substantial amount of self-regulation and effort (Graham, Harris, & Troia, 1998). Hayes' and Flower's model of writing is strongly influenced by self-regulatory behavior. They view writing as a goal-

directed action in which the writer guides the process by “identifying and organizing goals and sub-goals for what to do and say” (Graham & Harris, 1994, p.204). The writer directs the process from start to finish, utilizing his or her personal observations, judgments, and reactions as a guide (Graham & Harris, 1994).

Bereiter and Scardamalia 1987 Model

Bereiter and Scardamalia (1987) developed a simplified version of Hayes and Flower’s model called knowledge telling. Based on their experiences with school-age children, Bereiter and Scardamalia (1987) proposed that children implement a simplified version of writing that they refer to as “knowledge telling.” They believe children translate the writing task into merely telling what they know about a topic. Their model included three components that are very similar to Hayes and Flower’s components.

Components of the model. First, Bereiter and Scardamalia described the writer’s ability to define the topic and purpose of the text to be written as a *mental representation of the assignment*. Their second component, *long term memory*, referred to two types of knowledge writers utilize: content knowledge and discourse knowledge. A writer uses content knowledge to define what he or she knows about a topic and then discourse knowledge to draw conclusions about the type of text to be written. The final component, *knowledge telling process*, was the method in which immature writers navigate through the writing process. First, the writer makes decisions regarding the topic and type of text to be written. Then the writer moves to a search and retrieval process in which the writer constructs relevant content and discourse knowledge into *long-term memory*. Finally, the writer decides which information is pertinent to the topic and includes what is appropriate

within the text. Bereiter and Scardamalia's knowledge telling model is consistent with others' observations of struggling writers (Graham, in press).

Bereiter and Scardamalia's 1987 Expert Model

Bereiter and Scardamalia (1987) also developed a more expert model of writing called knowledge transforming. It is similar to their knowledge telling model in that both start with a *mental representation of the assignment* during which the writer determines the demands of the writing task. The transforming model was more complex than the knowledge telling model in that it assumed skilled writers plan text context in "accordance with rhetorical, communicative, and pragmatic constraints" (Graham, in press, p.8). Skilled writers are thought to move through a series of stages from knowledge telling to knowledge transforming.

Hayes 1996 Model

Hayes expanded his 1980 model developed with Flower in order to include the most recent advances in writing research (Graham, in press). Social and physical components were added to the *task environment* component in order to capture the social and physical influences audience, collaborators, other texts read, and word processors have on the writing process. Hayes' belief that the writer's goals, predispositions, beliefs, and attitude influence the writing process led him to also incorporate a *motivation/affect* component. The *long term memory component* was also improved to include linguistic and genre knowledge. Finally, the component of task schema was added to *long term memory* to acknowledge a writer's ability to carry out specific writing tasks.

In addition to changes within the *task environment*, *cognitive processes* were revised as well. Hayes (1996) put planning under a reflection category which included problem solving, decision making, and inferencing. In his model the skilled writer is thought to rely on planning and decision making skills in order to develop a series of steps aimed at achieving one or more writing goals.

Translation was also included under a more general category in the newer model. Hayes (1996) identified this new category as text production. The writer is thought to hold information pertinent to the text in working memory and as text is produced, the writer retrieves this information based on cues from the writing plan or the text produced so far (Graham, in press). The text can be revised based on the writer's judgments about the overall quality.

Revising was also replaced with the term text interpretation. Hayes (1996) defined text interpretation as the act of carefully reading text in order to make it better. Reflection and translation were also included as methods to correct problems in the text and execute changes. Hayes believed (1996) prompts from the writing plan or text already written help a skilled writer retrieve information to be held in working memory. Next the skilled writer will vocally or covertly transform this information into sentence parts that will ultimately be deleted, revised, or included in the final written product.

Hayes' (1996) final change to the 1980 model was adding the component, *working memory*. This particular component explained a skilled writer's ability to hold information and ideas for writing in working memory while simultaneously executing other cognitive processes that demand the writer's attention (Graham, in press). Hayes

(1996) also perceived working memory to be the boundary between *cognitive processes*, *motivation/affect*, and *long term memory*.

Hayes' 1996 model of writing is still too young to evaluate its impact compared to the Hayes and Flower's 1980 model. However, his inclusion of motivation and working memory are considered critical parts of the writing process that are most likely to have a significant influence (Graham, in press).

Zimmerman and Risenberg's 1997 Model

Zimmerman and Risenberg's (1997) model differed from previously mentioned models in that these models attempted to explain how skilled writers gain the cognitive and noncognitive skills needed to write rather than focusing on the writing process at different developmental levels (Graham, in press). Their model is strongly influenced by Bandura (1986) and Zimmerman's (1989) theory of social cognitive learning and primarily focuses on the self-regulatory aspects of writing. According to their model, writers utilize self-regulatory behaviors to purposefully regulate their writing behavior, environment, and their "internal thoughts and processes" (Graham, in press, p.12). They believe writers will continue to use strategies they determine to be beneficial and abandon those that are unsuccessful. Writers' self-efficacy is also thought to be tied to the success of the strategies employed. When self-efficacy is high, the writer is more intrinsically motivated to carry out the task of writing using self-regulatory processes.

Graham (in press) noted three distinct ways Zimmerman and Risenberg's 1997 model significantly contributed to our knowledge base of the writing process. First, their model gave an explicit description of how writers purposefully control the act of writing. Second, it explained how a writer's self-efficacy can influence self-regulatory behavior

and performance in writing. Third, they addressed the progression in which writers obtain new self-regulatory behaviors.

As the theoretical basis of writing continues to develop, it is important for researchers developing writing interventions to utilize the rich body of information provided by each model. The models reviewed provide both theoretical and developmental guidelines to aid in the development of the current intervention.

Review of Writing Interventions

During the last two decades, two approaches to writing instruction have dominated classrooms. They are the process approach and the strategy approach. Both emphasized the cognitive processes fundamental to the writing process; however, how instruction is delivered varies. While both of these of these interventions have been effective for many students, including those with disabilities, their effects on the writing of EBD students have never been examined.

The Process Approach

MacArthur and Graham (1993) described the process approach as having two main features. First, teachers who implement the process approach in their writing program create a community of learners in the classroom. The community supports an environment that encourages students to choose writing topics that interest them, listen to other's writing, reflect on their work and their peers, and take risks (Harris & Graham, 1996). It is very self-directed. Second, the cognitive processes of writing are emphasized throughout planning, writing, revising, editing, and publishing (MacArthur & Graham, 1993). The process approach closely resembles the Whole Language approach in reading (Harris & Graham, 1996).

A major premise of the process approach is to immerse students in authentic writing tasks so that the quality of their writing will improve (Bechtal, 1985). While whole language and the process approach both create learning environments that support students' reading and writing, they frequently lack the kind of explicit instruction in skills and strategies that students who struggle with writing need (Harris & Graham, 1996). Students who struggle with learning require more explicit instruction in order to acquire a variety of cognitive strategies (Harris & Graham, 1990; Pressley, Harris, & Marks, 1992). There have been at least two research-based studies that support the effectiveness of the process approach with students with LD (Danoff, Harris, & Graham, 1993; MacArthur, Graham, Schwartz, & Schafer, 1995). However, in both these studies strategies instruction was integrated within the process approach. Findings from both studies support the proposition that in order for students who struggle with writing to experience success in using the process approach, it must be combined with strategies instruction.

Strategies Instruction

Strategies instruction incorporated some of the same fundamental beliefs about writing as the process approach such as; putting a structure around the writing period; emphasizing the cognitive processes underlying writing; taking advantage of teachable moments; and meeting with students throughout the writing process to discuss ideas and problems. However, it is a more explicit and supported approach to writing that has helped many struggling writers develop and use more sophisticated writing and self-regulation strategies (Harris & Graham, 1996).

Bos and Vaughn (1998) described learning strategies as an approach to solving a problem using goal-directed behavior. Students make a commitment to use a strategy.

Then, they are taught the appropriate procedures to implement the strategy through discussion and modeling. They are guided in the use of the procedures until independence is reached. Controlled practice and feedback are provided. Maintenance and generalization of the procedures are planned for and carried out. Johns, Crowley, and Guetzloe (2002) claimed strategies instruction is successful for students with EBD and LD for the following reasons: it matches a strategy to the individual needs of a student; it utilizes explicit instruction to describe why, when, and where to use the strategy; it provides ample opportunities for students to practice using the strategy; it allows for prompt and specific feedback; and can help students self-monitor and self-evaluate their strategy usage.

Writing Interventions and EBD Students

While strategies instruction has been successful with students with EBD, evidence of its use in the area of writing is absent from the literature. Likewise, there is no empirical evidence to support the use of the process approach in writing with EBD students.

Research-based academic interventions, in general, are scarce for students with EBD.

Malmgren (in press) reviewed the academic intervention literature for EBD students, in the area of language arts, only to find 23 studies. Of these 23 studies, only 4 were in the area of writing. Studies were included in Malmgren's review based on the following criteria: the inclusion of at least two school aged participants receiving special education services for EBD; inclusion of some type of intervention as an independent variable; and inclusion of at least one academic measure of a language arts skill. For the purposes of the current proposal, only the writing studies are reviewed. Two were conducted with

elementary age participants and the remaining with high school students. In the following section, each of these studies are reviewed.

Spelling. Both the elementary studies focused on spelling. In the first elementary study, McLaughlin (1983) taught 3 participants to self-monitor their on-task behavior. Participants were instructed independently. The dependent variable for spelling was the mean percent of correct answers on spelling assignments. The strategy was implemented over a period of 30-37 days. Results indicated positive changes in spelling behavior for two of the three students.

The second elementary study had mixed results. Langone, Levine, Clees, Malone, and Koorland (1996) compared the writing samples of 6 participants, produced on a word processor versus handwritten samples using a repeated measures, alternating treatment design. Participants were instructed over a two week period in the “basic rules of grammar, spelling and punctuation” (p. 147). Lessons were intended to be a review of writing skills previously covered by the participants’ classroom teachers. Four lessons were solely dedicated to familiarizing participants with the word processor. Directions for both conditions were the same, students “should feel free to make changes in their stories or to start over at any time” (p. 148).

Data were collected across 10 writing opportunities. An equal number of paragraphs was produced using word processors and handwritten samples. Paragraphs were evaluated for errors in capitalization, spelling, punctuation, and grammar. An additional rating of quality was also utilized. Quality was scored based on the following criteria: having a topic sentence; having a clear theme and presenting ideas in a logical order; and having an ending sentence. One point was awarded for each criteria included per

paragraph. A standard of 80% correctness was used to indicate criterion performance (Langone, Levine, Clees, Malone, & Koorland, 1996).

Results indicated no differences were found between the two conditions in reference to correct spelling. For capitalization, the majority of participants did better in the paper and pencil condition; however, no meaningful difference between the conditions existed when evaluating each participant individually. No significant differences were evident for punctuation. For grammar, participants made slightly less errors in the computer condition. Similarly, no significant differences were evident for quality. Two of the participants performed slightly higher in the computer condition but not enough to strongly recommend one condition over another.

Composition. Both high school studies focused on composition, specifically the area of creative writing. In the first study, conducted by Glomb and West (1990), two participants were taught how to use a self-monitoring procedure called WATCH (Write down assignment; Ask for clarification or help; Task-analyze the assignment and schedule; CHeck all work for completeness, neatness, and accuracy) to help them complete creative writing homework assignments. Training consisted of three 30 minute lessons. Participants learned the basics about behavior change, how to use self-instruction strategies, how to set goals, implement plans, and how to self-evaluate one's work (p.234).

Results of the intervention indicated positive increases in completeness, accuracy, and neatness of creative writing assignments. Using self-management techniques with high school students with EBD was supported by the study. However, a weakness of the study was the failure to include maintenance and generalization procedures. The overall

validity of the study would have been significantly increased had the participants been trained to use the self-management procedures across other subjects and in other settings.

The second high school study also focused on creative writing. Schloss, Harriman, and Pfeifer, (1985) utilized a multiple baseline across participants design to compare a systematic prompting system to a random prompts method in increasing the independent written output of three students with EBD. Four levels of sequential prompt reduction techniques were used: self-initiated, motivational, content-related, and literal. The scripted method of sequential feedback was compared to the random method. The random method left feedback to the whim of the teacher. The goal of the intervention was to decrease students' dependence on the teacher for feedback. Procedures were identical for both methods except for the order the prompts were given and the availability of feedback.

Results indicated an increase in average rate of sentence completion per session and writing quality under the systematic prompting treatment method. However, a weakness of the study was the failure to include generalization or maintenance procedures.

While the previous four studies provide some support for the use of self-management techniques with EBD students, they offer little evidence for effective practices for teaching students with EBD to write. With the exception of some self-regulation techniques used, no traces of the process approach or strategy instruction such as goal setting, scaffolding (guided instruction), modeling, planning, or sharing of ideas and written work were evident in these four studies.

Conclusions

In response to the limited amount of effective academic interventions targeting students with EBD, some researchers suggest looking at what has been effective with students with LD (Epstein, Kinder, Bursuck, 1989). Scruggs and Mastropieri (1986) stated students with EBD and students with LD are similar in regard to academic functioning and that interventions that have been effective with the LD population should be tried with students with EBD. If students with EBD learn and respond to interventions similarly to students with LD and other mild disabilities, than results from successful interventions could be generalized to students with EBD.

The current study attempted such a practice in the area of writing. One empirically validated writing strategy that has been very successful with students with LD is Harris and Graham's (1996) SRSD model. An intervention that has been highly effective with one population, however, might not directly generalize to another. However, in the following section, a review of SRSD literature in the area of writing with students who struggle with writing, in particular students with learning disabilities (LD) will be presented in order to provide evidence to support the use of SRSD instruction in writing with students with EBD.

Self-Regulated Strategy Development

SRSD is a theoretically and empirically validated approach to writing that has had tremendous success with many kinds of students, including students with learning disabilities. Designed by Harris and Graham, SRSD is a theoretically integrated approach, intended to improve students' strategic behaviors, self-regulation skills, content knowledge, and motivation (Graham & Harris, 2003). SRSD grew out of Harris' early

research on cognitive-behavioral interventions for children and Graham's early work on children's writing (Graham, Harris, & Zito, 2004). Since 1985, more than 30 studies have been conducted using SRSD, primarily in the area of writing, with students from elementary through high school (Wong, Harris, Graham & Butler, 2003). SRSD has been found to be effective in the areas of reading and math as well.

SRSD has had significant effects on four aspects of students' writing performance: students' knowledge of writing, quality of writing, approach to writing, and self-efficacy (Graham & Harris, 1999). While SRSD encompasses teaching multiple skills and strategies, it also incorporates current beliefs regarding expertise in subject-matter domains (Alexander, 1997). Learning is viewed as a complex process that relies on "changes that occur in the learners' skills, strategic knowledge, domain-specific knowledge and motivation" (Graham & Harris, 2004; Alexander, Graham, & Harris, 1996). Strategic knowledge is improved by teaching students more complex strategies for tackling an academic task or problem (Graham & Harris, 2003). Self-regulation is addressed by teaching students how to set goals, self-monitor, use self-instructions, and self-evaluate. Content knowledge is enhanced by teaching relevant information and skills students need to utilize the strategies or self-regulation procedures. Motivation is elevated by "emphasizing the role of effort in learning, making the positive effects of instruction concrete and visible" and encouraging an "I can do" attitude (Graham & Harris, 2003). Instruction using SRSD is responsive to students who struggle with learning because it addresses their multiple cognitive, behavioral, and affective challenges (Harris, Graham, & Mason, 2003).

Interventions using SRSD have also incorporated instructional components for supporting the acquisition, mastery, fluency, maintenance, and generalization of skills and strategies (Graham & Harris, 2004). A major tenet of SRSD instruction is to provide scaffolding as students are first learning a new skill or strategy. As students become more proficient, scaffolding is faded until they achieve mastery. The newly mastered skill is practiced until students meet the desired criterion and are able to use the skill or strategy at other times and places. When a student is having difficulty maintaining the newly learned skill or strategy, booster sessions are provided.

Graham and Harris (2004) identified five critical characteristics of SRSD instruction: (1) Strategies and self-regulation procedures are explicitly taught, as students who struggle with learning generally require more systematic and direct instruction to be successful. (2) Instruction between the teacher and student is a collaborative process. (3) Instruction is individualized to meet the needs of students in regard to the processes, skills, and knowledge targeted for instruction. Feedback and support are offered as needed. (4) Instruction is criterion based. Students move through instruction at their own pace and do not proceed to later stages of instruction until they are ready. Instruction comes to an end when students can use the strategy and self-regulation procedures capably and successfully. (5) SRSD is an ongoing process in which new strategies are introduced and old ones are upgraded (Graham & Harris, 2003)

Graham and Harris (2003) conducted a meta-analysis of 18 studies executed in the area of writing from 1985-2002. SRSD studies have included a variety of students: students with LD (13), students identified as poor writers or low achievers (3), students identified as good writers or gifted (2), and students with multiple disabilities such as LD

and attention-deficit disorder (3). Participants across all 18 studies ranged in grades 2-8. Single case and group designs were both utilized. In the following sections, a summary of results will be provided.

The findings of Graham and Harris' (2003) meta-analysis revealed several important conclusions about SRSD. To discuss the results in quantitative language, effect sizes for group design studies and percentage of non-overlapping data (PND) points for single case designs will be used. The following questions will be addressed based on their meta-analysis: (1) Does SRSD improve students' writing performance? (2) Are SRSD effects maintained and generalized? (3) Is SRSD effective with different types of genres? (4) What components of SRSD instruction are most important?

Does SRSD improve students' writing performance?

Four variables that appeared most frequently in SRSD studies with writing are quality, elements, story grammar scale, and length. Quality measured the overall value of a student's paper. Elements were measured by the inclusion of "basic genre elements or parts in a composition" (Graham & Harris, 2003, p.334). Story grammar scale evaluated the inclusion and quality of elements or parts. Length was measured by calculating the number of words in a composition.

In general, instruction in writing using SRSD resulted in large effect sizes for quality, structure, and length of students' compositions (Graham & Harris, 2003). Across all studies, average effects sizes at posttest for group designs were 1.47 for quality, 1.78 for elements, and 2.0 and above for length and story grammar. Results for single-case studies were similarly robust. Average PND's for quality, elements, and story grammar were all above 90%.

Average effect sizes at posttest for students with LD (11 studies) were also significant. For group studies, average effect sizes were 1.14 for quality, 1.86 for length, and above 2.0 for elements and story grammar. PND's were above 89% for all measures. Based on their results, it can be stated with great confidence that SRSD is an effective intervention that improves the "quality, structure, and length of students' writing" (Graham & Harris, 2003, p.337).

Are SRSD effects maintained and generalized?

An important goal for intervention research for LD students as well as EBD students is to maintain and generalize positive effects gained through the intervention. Graham and Harris (2003) found the overall effect sizes from 18 SRSD studies at maintenance were less robust when compared to posttest results. However, they were still in the moderate to large range for quality, number of elements, and length. The average effect size for group designs studies ranged from 0.74 to 1.60 for all students and 0.69 to 1.82 for students with LD. Thus, SRSD effects were maintained after intervention.

Generalization measures were used to evaluate how well students transferred the use of a strategy in one type of genre to another. Generally, participants are asked to generalize the strategy to a genre closely related to the one they have been learning. For example, in studies examining a story writing strategy the generalization measure normally used was personal narrative. Similarly, when opinion essays were the target genre, the generalization measure commonly used was informative writing.

Generalization data were only available for poor writers and students with LD. For students with LD average PND's were 84% and 83% and effect sizes ranged from

0.86 to 1.23 for poor writers. It appears, poor writers and students with LD had little difficulty transferring SRSD strategies from one genre to another.

Is SRSD Effective with Different Types of Genres?

Graham and Harris (2003) evaluated the effectiveness of SRSD across narratives (story and personal narratives) and expository (explanatory and opinion essays) genres. Results of their analysis indicated large effect sizes across all genres. For all group designs at posttest, effect sizes were 1.44 or greater. For narratives average effect sizes for group designs at posttest were 1.52 for quality, 1.76 for elements, and 2.21 for length. Average effect sizes for expository compositions at posttest were 1.44 for quality, 1.99 for elements, and 2.04 for length. PND's for each genre were in the effective to very effective range (71-100%). In summary, no significant differences between genres at posttest and maintenance were evident (Graham & Harris, 2003).

What Components of SRSD Instruction are Most Important?

Graham and Harris (1989) and Sawyer, Graham, and Harris (1992) examined the added significance of explicit instruction in the self-regulation procedures of goal setting, self-monitoring, and self-recording. Authors of both studies analyzed the effects of teaching students with LD a strategy for planning and writing a story. Average effect sizes of .07 and .05, respectively, indicated the self-regulation procedures had little additive effect at posttest and maintenance on the story grammar measure. However, a significant incremental effect on the generalization measures was reported (average ES = 1.03).

Sawyer et al. (1992) took the analysis a step further. They not only removed the self-regulation procedures (goal-setting, self-monitoring, and self-recording), but other

procedures thought to encourage self-regulation as well (self-statements, teacher modeling, and collaborative practice). Forty-three fifth and sixth grade students with LD were assigned to four conditions; full SRSD, SRSD without explicit self-regulation instruction, direct teaching, and a nonrandomized practice control. SRSD without explicit self-regulation instruction was defined as no explicit instruction in goal setting, self-assessment, and self-recording. Direct instruction was defined as no explicit instruction in goal setting, self-assessment, and self-recording. In addition, any components that might have encouraged self-regulation implicitly such as developing personalized self-statements, modeling of the strategy and self-regulation components by the teacher, and collaborative practice were removed. The control condition was a group of normally achieving students who received no instruction.

Participants in the full SRSD and SRSD without explicit self-regulation instruction conditions significantly outperformed students in the control condition on the story grammar measure at posttest. Effect sizes at posttest on the story grammar scale for the full SRSD condition were 1.96. No significant differences were found between the control and direct teaching conditions on the story grammar scale. These results supported the use of self-statements, modeling, and collaborative practice.

In regard to generalization and maintenance, participants in the full SRSD condition earned significantly higher story grammar scores on the generalization probe than the direct teaching and SRSD without explicit instruction conditions (Graham, & Harris, 2003). No significant differences between conditions were evident at maintenance testing. However, participants in the full SRSD condition obtained the highest effect size on the story grammar scale at generalization (2.78) and maintenance

(1.51). Quality scores were small at posttest (0.30) but considerably stronger at maintenance (1.15) and generalization (1.22). These findings indicated that self-regulation components in the full SRSD model have a significant effect on the writing performance of students with LD and appear to get stronger in the area of quality as students get more practice.

Based on the overall results of Graham's and Harris' (2003) meta-analysis of SRSD research, it is evident that SRSD has been a highly effective intervention in the area of writing for students with LD and also struggling writers. If students with EBD and LD are truly similar in respect to their academic deficiencies, then SRSD would be an effective intervention in the area of writing for students with EBD. Additional support for this position will be provided as the role of self-regulation in writing is examined in the following section.

Self-Regulation in Writing

Schunk and Zimmerman (1997) defined self-regulation as “learning that results from students’ self-generated thoughts and behaviors that are systematically oriented toward the attainment of goals” (p. ix). Self-regulated learners are active participants in their personal learning process. An important goal for all students is to become more self-regulated, however it is vital to the school success of students with EBD.

Unfortunately, distractibility, impulsivity, noncompliance, aggressiveness, and poor independent work skills are not uncommon characteristics of students with EBD (Levondoski & Cartledge, 2000). Such behaviors are the antithesis of self-regulated behavior, and for students with EBD and can contribute to poor experiences in school.

Low self-regulatory skill is frequently correlated with low academic performance commonly observed in students who struggle with learning (Harris, 1982).

Current school related outcomes reported for EBD students indicated a 58% drop out rate, 63% failure rate on competency exams, and only a 22% graduation rate with a standard diploma (Callicott & Park, 2003). Self-management has been a viable method for actively involving students with EBD in changing behaviors that impede their learning process. The use of self-regulatory procedures are not the single answer to turning poor predicted outcomes of EBD students around, however it is key component in putting the power to change these outcomes in the hands of who it is most meaningful, the learner.

In the following section, a brief history of what has been attempted to improve the academic outcomes of students with EBD is presented. Next, self-regulatory procedures will be described and empirical support for their use will be provided.

Externally Managed Programs

Historically, externally managed programs have been the primary means utilized by teachers to change the academic and social behaviors of students with EBD (Nelson, Smith, Young, & Dodd, 1991). While many externally managed programs have been effective, there are possible disadvantages associated with their use. First, the external manager may fail to observe much of a student's behavior. Second, because the external manager is the distributor of the contingency, their presence is necessary as a cue to the desired behavior. Finally, is the possibility that a student's motivation to manage his or her behavior may decrease due to the single focus on task completion in order to receive the contingency (Nelson, Smith, Young, and Dodd, 1999; Kazdin, 1975). Decreased

emphasis on intrinsically motivating students to manage their own behavior leaves students with EBD at a great disadvantage.

Self-Regulatory Procedures

In response, one method that holds promise for EBD students is the use of self-regulation (Callicott & Park, 2003, Nelson, Smith, Young, & Dodd, 1991). Self-regulatory skills or self-management procedures have been defined as “a set of procedures designed to develop the self-regulation of behavior (Callicott & Park, 2003). Four types of self-regulatory skills will be described in relation to the current study; self-monitoring, goal setting, self-reinforcement and self-instruction.

Self-monitoring. Self-monitoring refers to purposeful attention to some aspect of one’s behavior followed by documentation of its frequency or intensity (Schunk & Zimmerman, 2003). Self-monitoring has been the most thoroughly researched method of self-regulation (Harris, Reid, & Graham, 2004). Methods for self-monitoring might include narrations, frequency counts, duration measures, time-sampling measures, behavior ratings, or archival records. The two most common types of self-monitoring used in academic settings are self-monitoring of attention and self-monitoring of performance. Students who self-monitor their completion of assignments provide themselves with an immediate reinforcer rather than waiting for an external one.

Goal setting. Goal setting helps students regulate their behavior. It also encourages longer persistence and helps students attend to the task at hand (Graham, MacArthur, Schwartz, & Page-Voth, 1992). Additionally, it enhances motivation (Harris & Graham, 1996). When students set out to achieve a goal there is a personal commitment made that helps students sustain effort over time.

Three important properties of goals are specificity, proximity, and difficulty (Schumk, 1994). Task specific goals (e.g., “To write a story using all 7 parts” are more likely to be effective than general goals (e.g., “Write a story getting as many parts as you can”). Proximal goals (short term) help encourage motivation more than distal goals. For younger students, distal goals can be overwhelming and seem unobtainable. Goals should be achievable, but not too easy. Students are more likely to work harder to achieve difficult goals when standards are higher but not out of reach. In addition, to encourage ownership, students should be involved in setting their own goals and understand why the goal is important.

Self-reinforcement. Self-reinforcement occurs when a student reinforces him or herself with a reinforcer they have chosen and at a time they have determined. Graham and Harris (1996) recommend four procedures for using self-reinforcement: (1) setting a criterion for performance; (2) selecting the reinforcer to be received; (3) assessing performance; and (4) self-administering the reinforcer. One type of self-reinforcement that will be utilized in the current proposal is self-statements. Students will learn to reinforce themselves with positive statements (e.g., I wrote a fantastic story).

Self-instruction. Self-instruction is when a student uses overt or covert speech to direct his or her behavior. These statements might be directions to complete an academic skill, a personal affirmation, or other statements used to regulate behavior (Callicott & Park, 2003). Successful approaches to teaching self-instructional development integrate affective, behavioral, cognitive, social, and developmental theories and research (Harris, 1990). Self-instructions are developed through teacher led cognitive modeling of strategy use. This process includes several steps modeled by the teacher. First, the teacher models

use of a “think aloud” procedure. Next, the teacher explicitly and overtly guides the student to use the same procedure until the student is comfortable using the strategy independently. As the student gains independence, he or she will move from overtly verbalizing self-instructions to covert use (Meichenbaum, 1977).

For the purposes of the current proposal, six types of self-instructions will be utilized by participants. The first type of self-instruction, *Problem definition*, will help students define the purpose and demands of the writing task; e.g., “What is it I need to do? I need to write a story that has all seven parts.” Next, *Focusing of attention and planning* self-statements will help a student stay on task by generating a plan of action; “Next, I need to create a setting using descriptive words.” A fourth type of self-instruction is *strategy usage*. Statements like, “I am going to organize my notes using my graphic organizer. Then I am going to use my notes to write a good story.” *Self-evaluating* statements are extremely beneficial in writing because poor writers frequently do little to no editing or revising of their work. Statements like, “That sentence does not make sense; I need to rewrite it.” Perhaps the most critical types of statements for students with EBD are *coping and self-control* statements; e.g., “I need to take my time and a good idea will come to me.” “I can write a good story that has all 7 parts!” The final type of self-statement will be *self-reinforcement*. Students will learn to use these types of statement to reward themselves for a job well done, e.g., “My story makes sense, has all 7 parts, and is fun to read!”

Empirical Support for Development of Self-Regulation Among Students With EBD

Empirical support for the use of self-regulatory skills with students identified as EBD has been found across both social and academic behaviors (Nelson, Smith, Young,

& Dodd, 1991; Levondoski & Cartledge, 2000). Self-regulatory skills have become a viable compliment to externally managed programs in actively involving students with EBD in the behavior change process (Hughes, Ruhl, & Misra, 1989). Two comprehensive reviews of self-regulatory procedures are reviewed in the following section: Hughes, Ruhl, and Misra (1989); and Nelson, Smith, Young, and Dodd (1991). Both found the use of self-regulatory procedures effective for students with EBD. Their findings also indicated it has become a valuable method for increasing, generalizing and maintaining target behaviors. In addition to their comprehensive reviews, three more recent studies are reviewed to provide additional support for the use of self-regulatory skills with students with EBD.

Hughes, Ruhl, and Misra (1989). In Hughes, Ruhl, and Misra's (1989) review of self-management procedures 10 studies conducted between the years of 1970-1988 were reviewed. All the studies were data based, included students who were EBD, conducted in school settings, and used either self-monitoring, self-evaluation, self-reinforcement, or self instruction as the independent variable. Studies were analyzed by participants, setting, self-management procedure (independent variable), behavior measured (dependent variable), measurement/reliability, design, and results.

Overall, the total number of participants (43) was predominately male however; sex was not reported for 10 participants. The average ages of participants ranged from 8-16. Most participants were described as low-achievers with IQ scores in the normal range. The majority of the studies (8) were conducted in self-contained settings. Three studies took place in resource room settings. Nine studies were conducted with elementary school students, and only 2 studies were conducted with high school students.

Self-monitoring was the most frequently examined self-management procedure across all studies. Self-instructions, self-reinforcement, and self-evaluation were studied equally. A weakness in the findings was that few studies used self-management procedures only, making it difficult to discern if the results were because of the self-management procedure or another variable such as reinforcement. Another weakness of the studies reviewed was lack of justification for using one particular self-management procedure over another. The use of any self-management procedure should be based on a “documented need and should consider cognitive and affective characteristics of the learner as well as characteristics/demands of the task” (Hughes et al., 1989). Failure to describe why a particular self-management procedure was selected makes it difficult for consumers of research to generalize the findings to students with similar needs. Additionally, it makes it difficult for other researchers to replicate the findings.

A final weakness of the studies reviewed was the lack of detailed information about training and instructional procedures. Failure to provide detailed information makes it almost impossible to attempt replication.

Overall, results of the analysis indicated that the use of self-management procedures increased academic performance, homework completion, on-task behavior, and appropriate classroom behavior when used with other self-management procedures. However, the reliability of these results was weakened by: the failure to include detailed description of the participants; lack of description in regard to procedures and training; the inclusion of other external reinforcers along with self-regulation procedures; and failure to justify the use of self-management procedures.

Nelson, Smith, Young, and Dodd (1991). In a review of 16 studies from 1976-1985 Nelson, Smith, Young, and Dodd (1991) examined the overall effects of self-management on social and academic behaviors of students with EBD. Only two criteria were specified for inclusion in their review; participants were identified as EBD or another common classification such as hyperactive or socially maladjusted; and the study took place in a classroom setting. Studies were analyzed by participants, dependent and independent variables, and treatment effects. Treatment magnitude was measured for group designs by effect sizes. For single case studies proportion of overlapping data was used (PND).

The majority of studies were conducted with elementary aged students. Similar to Hughes et al., lack of description regarding the participants was a significant weakness of the study. Only 5 of the 16 studies reviewed reported the gender of the participants and only 2 studies gave information regarding the IQ of participants. Failure to report such critical information makes it difficult to generalize the findings.

Self-instruction and self-recording were the most frequently examined procedures. Three studies looked at a combination of self-management procedures. Overall, the authors reported that self-management procedures improved the social and academic behaviors of students with EBD. Results of their review were strengthened due to moderate to large treatment effects obtained, indicating that self-management procedures are a viable alternative to externally managed programs. Results regarding the generalization of self-regulation treatment effects indicated less than robust findings unless generalization was systematically programmed for.

More recent studies on self-regulation procedures used in academic areas have provided further evidence of the success of such procedures with students with EBD. Instruction that combines the components of self-regulation with academic strategies contributes to student learning (Graham, Harris, & Reid, 1992). In the following sections, several recent studies are reviewed to support this statement.

Cancio, West, and Young (2004). Cancio, West, and Young (2004) conducted a multiple baseline across participants study with six students identified as EBD and their parents. The parents were trained to maintain a homework completion program based on teaching the students to manage their own behavior. Students were trained on how to manage their homework notebook and program. Homework assignments were in the area of math and were matched to students' abilities. Students' homework completion rates improved from an average of 2% at baseline to an overall average of 92% at post intervention. Homework accuracy also improved from an average of 2% at baseline to 89% at post intervention. An increase in academic achievement and decrease in homework problems were also reported. Support for self-management skills in improving strategy-based instruction was an important result of this study.

Carr and Punzo (1993). Additional support for the use of self-regulatory procedures for students with EBD was reported in a multiple baseline study conducted by Carr and Punzo (1993). The authors examined the areas of academic accuracy, academic productivity, and on-task behavior across three subject areas; reading, math, and spelling. All 3 participants were male, identified as EBD, and between the ages of 13-15.

First, participants were given an explicit definition of academic achievement. The teacher then used this knowledge to convince students of the importance of improving

accuracy and productivity. Subsequently, each teacher explained to the participants how to self-record their progress in each subject area. Next, the teacher modeled how to use the procedures. Finally, the teacher had the participants repeat the definition of academic achievement and summarize why it is important to keep track of accuracy and productivity.

When self-monitoring was introduced in each subject area, participants' overall academic accuracy increased significantly. Increases in productivity and on-task behavior increased as well. Anecdotal data indicated that participants willingly recorded daily scores on weekly subject area charts and appeared to be aware of their improvements. Teachers also reported that students began to set goals without prompting.

Levondoski and Cartledge (2000). In a similar single case design study, Levondoski and Cartledge (2000) also examined on-task behavior and the academic productivity of four male students while completing seat work in the subject area of math using self-monitoring procedures. This study differed from Carr and Punzo (1993) in that the independent seat work was material the students had not yet mastered. Participants used self-monitoring cards to check off if they were on task or not when a timer bell would go off every ten minutes. Participants made significant gains in on-task behavior and academic productivity using a self-monitoring procedure. However, effects were not well maintained when the self-monitoring cards were removed. The authors noted a more gradual fading procedure may have allowed for academic productivity to be sustained for a longer period of time.

Role of Self-Regulation in Maintenance and Generalization

A major concern in designing effective school based interventions for children is whether effects are maintained over time and if students are able to generalize what they have learned to other tasks and in other settings (Lane, Beebe-Frankenberger, Lambros, & Pierson, 2001; Graham & Harris, 1997). In a review of academic interventions conducted with students with EBD, a major weakness revealed was the absence of maintenance probes (Malgrem, in press). It appears that generalization and maintenance are frequently “hoped for rather than planned for” by researchers when designing interventions for students (Lane et al., 2001).

Lack of attention to the importance of maintenance and generalization in the design of academic interventions is even more disturbing when one appreciates how difficult the tasks of generalization and maintenance are for students who experience difficulty self-regulating their behavior. Pressley et al. (1992) attributed the failure of students to effectively use strategies they have learned to one of three reasons: first they may not recognize when to use a particular strategy; two they change a strategy so that it is ineffective; or three, they just do not like a strategy or find it to be unbeneficial.

Effective instructors plan for implementation and maintenance of strategies in relevant contexts. Students need to be explicitly shown how to transfer strategies to other times and settings. They must recognize the value of learning and using strategies. A substantial part of the proposed intervention is the systematic implementation of generalization instruction as well as plans for maintenance.

LD/EBD Connection

The study reported here benefited from two decades of well-designed SRSD intervention studies conducted with students with LD. It has been suggested that a great amount of similarity exists between LD and EBD students in regard to academic performance. Scruggs and Mastropieri (1986) reported that no differences in academic achievement of students with LD and EBD are present. Similarly, it has been suggested that academic interventions that have been successful with other populations be applied to students with EBD (Epstein, Kinder, and Bursuck, 1989). These findings suggest that students with EBD may benefit from SRSD instruction as students with LD have in the past.

Current Study

This study was the first to investigate the effects of SRSD instruction in the area of writing with second and third grade students identified as EBD who are also poor writers. Many weaknesses identified by previous researchers in regard to interventions with EBD students were addressed in the current study.

First, a thorough description of participants was provided in Chapter three. Participant's age, sex, ethnicity, cognitive abilities, and SES were reported. In addition, a detailed description of each participant's identification as EBD process was provided. The teacher's identification of a student as EBD or a student's placement in an EBD self-contained classroom was not considered adequate verification of a participant as EBD. Students' records and reports of their identification process were reviewed by me in order to verify that each student had a primary disability of EBD.

Second, this study included both plans and measures for generalization and maintenance. Participants were explicitly instructed on how to transfer the strategy to other types of writing. Maintenance was supported by transfer efforts that were recorded and rewarded throughout the study. Generalization was measured by assessing participants' abilities to write personal narratives using the strategy in their classroom. Maintenance of the strategy was measured two weeks following the conclusion of the study.

Third, previous studies failed to address treatment fidelity. In the current study, the intervention and procedures are well described. Measures and procedures used to determine if the intervention was implemented correctly were also described.

CHAPTER 3

METHODS

The current intervention was the first to address the writing difficulties some 2nd and 3rd grade students identified as EBD experience using Self-Regulated Strategy Development (SRSD). It was hypothesized that by providing the participants with instruction in a writing strategy and self-regulatory procedures, as well as explicit instruction in how to generalize the strategy to other types of writing, performance in writing would improve. Specifically, the overall length, number of essential elements, and quality would improve for story writing and personal narratives. In addition, it was hypothesized that participants' overall feelings about writing and themselves as writers would improve as a result of learning the strategies.

Within the SRSD framework, the goals and significance of story writing and self-regulation strategies were discussed with the students. The strategies were explicitly and collaboratively modeled within the context of writing. As the students learned to apply the strategy, collaboration, scaffolding, and feedback were provided. These supports were removed as participants were able to apply and manage the writing and self-regulation strategies needed to compose independently. Further, students were explicitly taught how to generalize the strategy to other types of writing. Instruction was criterion based rather than time-based.

In this chapter, the pilot study is described as well as the methods for the current study. The research design is explained, including the criteria for participant selection. The setting, tasks, materials, and instructional procedures are also described in detail. Finally, an overview of the measures and data analysis procedures is presented.

Pilot Study

The purpose of the pilot study was to determine how students identified with EBD would respond to well-validated intervention in story writing using the SRSD model. Prior to the pilot study I had taught the same strategies to low-achieving and LD second grade students who struggled with writing. I wanted to see if any of the instructional procedures would need to be changed in order to meet the needs of students with EBD.

Participants and Setting

The W-W-W, What = 2, How = 2 writing strategy was piloted with three male third grade students identified as EBD by the school system. The students were receiving services in a self-contained setting in a public school located in a suburb of Washington, D.C. In addition, each student was identified as having problems with writing by their classroom teacher. All three students received instruction in all subjects from one teacher and teaching assistant in the classroom.

One participant was instructed individually and the remaining two participants were taught in a pair. Instruction took place in a corner located directly outside of the participants' classroom. For the most part, this area was free from distractions and relatively quiet.

Participants were taught the W-W-W, What = 2, How =2 strategy within the framework of Self-Regulated Strategy Development (SRSD) created by Harris and Graham (1996). All six stages of SRSD for strategy acquisition were included in scaffolded lessons: develop background knowledge, discuss the strategy, model the strategy, memorize the strategy, support the students' use of the strategy, and

independent performance. Students also set goals for performance, developed self-instructions, monitored their performance, and reinforced themselves as appropriate during strategy acquisition.

Prior to the beginning of the pilot study, student performance was assessed by writing a story in response to a picture prompt. The prompt was administered by the classroom teacher. Students were told they had as much time as they needed to write; their teacher however could not help them. If they had trouble spelling a word, she instructed them to do the best they could. Due to lack of time, post-testing was not conducted. However, all three students reached criterion as required in the independent and performance stage of SRSD. Criterion was defined as when a participant could independently write a story, with all seven parts, using self-regulation techniques and the W-W-W, What = 2, How = 2 strategy without any props (chart with strategy steps, graphic organizer, or self-statement sheet).

Instruction

No changes to the SRSD instructional model were made prior to beginning the pilot study, based on two assumptions suggested by the literature about students with EBD. First, it has been suggested that a great amount of similarity exists between LD and EBD students in regard to academic performance (Scruggs & Mastropieri, 1986). Second, it has been suggested that academic interventions that have been successful with other populations could be applied to students with EBD (Epstein, Kinder, & Bursuck, 1989). The success of SRSD with students identified as LD has been well established in the literature in the area of writing. Thus, I initially hypothesized that the three participants in

the pilot study would benefit from SRSD instruction without making any changes to the SRSD model.

While all three students reached criterion in the pilot study without making any changes to instruction, my experiences with these students led me to conclude that to maximize the results for students with EBD some changes should be made. Changes were not made to the SRSD model but to the typical sequence of instruction. First, self statements were introduced earlier in the instructional sequence. Second, establishing prior performance was moved to a later stage. Justification for these changes in the instructional sequence is provided in the following sections.

Self-speech. Typically, self-statements are introduced during the modeling stage of SRSD. However, due to the experiences of the participants in the pilot study, self-speech was introduced earlier in instruction for the current study.

Before developing individual positive self-statements, the participants in the pilot study exhibited negative self-talk such as “I can’t think of anything good” and “This is stupid.” One participant in particular was frequently frustrated by the writing process and often indulged in negative self-talk. After he learned to develop self-statements he could regularly be heard saying, “Focus, focus, focus!” Other statements the students developed were, “I can write a story with all 7 parts.” and “Take my time and a great idea will come to me!” While negative self-talk did not disappear during instruction, once students were armed with a strategy for deflating it, they utilized this new skill. Although my observations of self-speech are anecdotal, there did appear to be a shift from excessive negative self-talk to increased use of positive self-speech.

Prior performance. Typically, the introduction of self-statements in the sequence of SRSD methods is applied after students have already established prior performance. Prior performance is established by having the participants review a story they have written prior to introducing the writing intervention. They must determine how many essential elements their story contains and graph that number. Generally, these stories have very few essential elements, are short, and are of poor quality. However, they serve a significant purpose during instruction.

Participants use this initial story to set goals for their next story. To minimize feelings of inadequacy about the quality of this story, the instructor emphasizes that this particular story was written before participants had learned the story writing strategy and that students should not worry if they did not get all the parts. This not only helps to establish a purposeful reason for the students to make a commitment to learning the strategy, it also allows the instructor to capitalize on a teachable moment. The instructor uses these stories to discuss with the students how to make their current and future stories better.

Past experience with teaching poor writers the same strategy led me to expect that this particular discussion would be enough to deflate negative feelings students with EBD might be experiencing about themselves as writers. Typically, the next step is to take this self-realization the student is experiencing about his or her ability to write a story and lead them to make the commitment to learn the story writing strategy. It helps the student to set a goal to become a better writer. However, this was not the case for all three students in the pilot study. One student in particular experienced a high degree of negative self-talk based on his perceived writing ability. After reviewing a story he had

written during pre-test, he remained off-task for the duration of the lesson and indulged in an excessive amount of negative self-talk. The remainder of that instructional period was spent trying to convince the student that now that he knew a strategy for writing stories, he would see a marked improvement in the quality of his writing. I was quite unsuccessful in my attempts to convince him. However, as he learned to use positive self-statements, I did observe a decrease in negative self-talk. It did not disappear but he did learn a strategy for handling his frustration. His most frequent statement was, “focus, focus, focus” and delivered in singing like voice while he rocked his head back and forth.

Based on my observations of student behavior during the pilot, I decided it would be beneficial to establish prior performance after the concept of self-speech had been introduced and participants had developed individual self-statements for the current study. I also decided to wait until the participants had written at least one story collaboratively and graphed it before having them graph one of the stories written during baseline. The collaborative story would contain all the essential elements. I hypothesized it would help eliminate some frustration and disappointment with prior performance for participants in the current study if they had experienced some initial success with a collaborative story.

Current Study

In the current investigation, students with EBD also learned a strategy for story writing embedded within the framework of SRSD (Harris & Graham, 1996). In addition, where other academic intervention studies with EBD students failed to include generalization and maintenance measures, this study included both. Participants were explicitly instructed on how to generalize the strategy to other types of writing and their

efforts were discussed and recorded. Generalization of the strategy to another writing genre was measured by assessing students' abilities to write personal narratives using the story writing strategy. Maintenance of the strategy was measured two weeks after post instruction probes were administered.

In the following sections, the framework of the study is presented. First the criteria for the participant selection and setting are explained. Next, the tasks, materials, and instructional procedures are described. Finally, an overview of the measures and data analysis procedures is presented.

Participants

Participant selection was based on several criteria; however, the criteria described should be thought of as guidelines rather than absolutes. They were used to help prevent selecting students for whom the instruction may not have been appropriate. In the following section a more detailed description of the criteria is provided and how each participant was selected using the criteria.

Second and third grade students from one self-contained EBD classroom who met the criteria regarding EBD identification and were described as struggling writers were selected for the current study. For the purposes of the current study, "students who struggle with writing" met three criteria. First, participants who scored two-thirds of a standard deviation below the mean or lower for the normative sample on the Story Construction Subtest of the Test of Written Language, (TOWL -3; Hammill & Larsen, 1996) were considered. This subtest measures a child's ability to write a complete and interesting story. Students had to be able to write at least one sentence to help ensure the instruction was appropriate and not beyond his or her frustration level. Second,

participants had to be recommended by their classroom teacher as someone who struggled with writing and would benefit from additional instruction in writing based on classroom performance. Third, all participants had individualized education plan (IEP) goals in the area of writing. In addition to these criteria, participants also had a primary diagnosis of EBD. A detailed description of each participant's identification process and current behavioral and academic characteristics is provided.

To ensure the instruction was appropriate for each participant, and not beyond frustration level, IQ score of 80-120 on an individually administered norm referenced intelligence test was recommended. English was the first language of each participant. Finally, participants had to have a record of good attendance and be willing participants. Permission slips were sent out to all 7 students in the class.

Initially, I hoped to work with five of the seven students in the class. Of the initial seven, one student was eliminated based on his IQ score and inability to produce a single sentence during the administration of the TOWL. His teacher and I both felt the instruction was not appropriate for him. A second student was eliminated based on her unwillingness to cooperate. She cried during a baseline probe and pleaded with her teacher to not participate. She was new to the school and having a very difficult time adjusting to her new setting. She was spending a lot of time in the timeout room for aggression toward other students. For example, she threatened to harm one student with a pair of scissors. After discussing the student's current situation at school, her classroom teacher and I decided to eliminate her from the pool as well.

Of the remaining five students, two more were eliminated based on the time constraints of the study. Data collection was completed by the close of the school year for

participants one and two. Participant three was instructed beyond the school year at his daycare center. Consequences of instructing participant three in a setting other than his school will be addressed in Chapters 4 and 5. Due to summer vacation and parent unwillingness, participants four and five were dropped from the study as well. In the following section, a detailed description of each participant will be provided. Student characteristics are also found in Table 1.

Rose. Rose, a third grade African American girl from a single parent family, had a primary disability of EBD. She was identified as EBD in second grade. Her identification as EBD coincided with a tragedy in her life; the sudden death of her mother. She was referred for special education based on her behavior. According to her father and classroom teacher, prior to her mother's death, she exhibited extreme agitation in the classroom as well as hysteria and withdrawal. She was described as being frequently disoriented and out of touch with reality. She would engage in immature behaviors such as crawling on the floor and sucking her thumb. After her mother's death, the father indicated an increase in all of the aforementioned behaviors. In addition, following her mother's death, it was noted that she identified her teachers as mother figures and relied heavily on adults to guide and assist her. Rose was evaluated in February of her second grade year and an IEP was developed and implemented. Based on her need for intensive multi-sensory instruction in a small group setting with significant prompting and guiding, the IEP team at her home school referred her to the comprehensive program at the school in the current study for her third grade year.

In addition to a primary disability of EBD, Rose has also been diagnosed with attention deficit hyperactivity disorder (ADHD). She had been taking medication for

ADHD since the age of four and most recently took the medication, Concerta, daily. Rose was also identified as suffering from depression and oppositional defiant disorder (ODD).

Dennis. Dennis, a third grade, African American boy, also had a primary disability of EBD. Dennis was adopted by his single parent mother when he was almost seven. He was the oldest of three biological children. It was suspected he was neglected and sexually abused within his birth mother's home. His birth mother abused drugs and alcohol and died of a drug overdose when Dennis was six. Following the death of his mother, he went to live with a foster family for approximately one year. The summer before his first grade year, he went to live with his adoptive mother. He was officially adopted in the fall of his third grade year. He currently resides with his adoptive mother and adoptive brother. His brother is a fifth grader in the comprehensive program at the same school.

Dennis' adoptive mother requested a neuropsychological evaluation of Dennis during his first grade year based on his family history. Results of the evaluation indicated his emotional functioning was compromised by feelings of insecurity, fear, and emotional guardedness. The evaluator indicated he would be likely to challenge authority and more easily annoyed than this typical age peers. Results of a feelings test he was administered indicated a significant degree of anger and anxiety. He was described as emotionally fragile and vulnerable and prone to fight/flight response in order to self-protect. Dennis has also been diagnosed with an adjustment disorder with anxiety as well as post traumatic stress disorder.

John. John, a second grade, African American boy also had a primary disability of EBD. He lived in a two parent household. John was suspended six times for a total of ten

days, in the first grade, at his prior school. His kindergarten and first grade teacher described him as resistant to classroom routines and having great difficulty with rules and procedures. In addition both teachers noted he had difficulty separating from his mother. He was described as aggressive toward teachers and was suspended for biting and throwing chairs at adults. The school psychologist noted he was sensitive to failure and correction. He was diagnosed with an anxiety disorder during his first grade year and ADHD.

Academic Performance

IQ scores on the *Wechsler Intelligence Scale for Children – III* (WISC III: Wechsler, 1991) were available for Rose, Dennis, and John. Full scale performance scores ranged from 69-85. Dennis had a full scale IQ of 69. This was below the score recommended for participation in the study; after talking with his teacher and reviewing the other criteria however, he was permitted to participate. His classroom teacher and I both agreed it was not an accurate reflection of his actual ability. A breakdown of each participant's test scores is in Table 2.

Rose, Dennis, and John all had IEP goals in the area of writing. One example of a goal was to engage in independent writing activities such as journal writing. Another goal was to write different kinds of sentences (declarative, interrogative, imperative, and exclamatory). All three had a goal of learning to write for a purpose (inform, explain, persuade, and express personal views).

Rose, Dennis, and John were referred to the EBD comprehensive program at the school they were attending due to their excessive behavior and emotional problems. It was also noted in each of their files that their behavior significantly impacted their

learning. All required a small student/teacher ratio, in a highly structured small group setting. Instructional modifications, reduced pacing, and ongoing repetition and review were also academic recommendation for all three participants.

Setting

The study took place in an elementary school located in the suburbs of Washington, D.C. The school served approximately 240 students in grades K-6 and was situated in a low to middle class neighborhood. Approximately 60% of the students qualified for free or reduced lunch. The population of the school was predominately African American (71%) however, 22% were Hispanic, 4% Asian or Pacific Islander and 3% White. The school received Title 1 assistance and approximately 20% of students enrolled received Special Education services.

The above average percentage of students receiving special education services was most likely attributed to the unique comprehensive program for students with emotional and behavioral problems housed at this school. Students participating in the program are referred from their home school when emotional and behavioral problems are significantly interfering with their academic and social/emotional growth and home school interventions and services have not been successful.

The philosophy of the comprehensive program was grounded in social and academic skills, with the goal of preparing students to successfully reintegrate into the general education setting. The curriculum paralleled the school system in which it is located; however, there was a strong emphasis on social skills, work habits, communication skills, self-esteem building, anger management, and self-control.

All the students who participated in the study came from one self-contained second/third grade classroom. Students were not mainstreamed for any subjects. The class was made up of five boys and two girls. There were three third graders and four second graders in the class. The classroom teacher was a certified special education

Table 1

Participant Characteristics

Participant	Age	Race	Sex	Grade	English First Language	Free/Reduced Lunch
Rose	113	AA	F	3	Yes	Yes
Dennis	110	AA	M	3	Yes	Yes
John	91	AA	M	2	Yes	Yes

Note. Age in months.

Table 2

Academic Characteristics

Participant	TOWL-3	Full Scale WISC-III
Rose	8	81
Dennis	5	69
John	8	85

Note. TOWL-3 = *Test of Written Language-Third Edition*; WISC III = *Wechsler Intelligence Scale for Children – Third Edition*; Standard scores were reported for TOWL-3 ($M=10$; $SD=3$)

teacher with a Master's Degree in special education. There was also an instructional assistant. Two resource teachers were available for crisis intervention and a school-based psychologist was available for counseling and consultation.

The principal of the school insisted all instruction for the study take place in the library due to limited work space in the building. Some days the library was quiet and free from any distractions. However, on most days classes were filtering in and out of the library while I worked with each participant. To minimize distractions, we sat at a back table and participants had their backs to other students in the library. I introduced myself as a writing teacher who would be teaching them some "tricks" to help them become better writers. All three participants worked with me willingly.

Tasks and Materials

Instruction for the current intervention took place during students' language arts period for 30 minutes, 3-4 times per week. The intervention for the current study was the W-W-W, What =2, How =2, story writing strategy and self-regulation procedures. Rose, Dennis, and John utilized the steps of the strategy to write stories that were longer, contained essential elements, and were of overall better quality. They developed personal self-statements to facilitate strategy usage, as well as to defuse individual frustration levels with the writing process. They self-evaluated by recording the number of story parts completed in each story on a graphing chart. They set goals for writing based on their self-evaluations. Instruction was scaffolded until students could use the strategy independently. They reported back attempts made to generalize the strategy to other types of writing. Finally, instruction ended when criterion was met. Criterion was defined as when participants could independently write a story, with all seven parts, using self-

regulation techniques and the W-W-W, What = 2, How = 2 strategy without any prompts (chart with strategy steps, graphic organizer, or self-statement sheet).

Stories and personal narratives were written in response to prompts used by Graham and Harris (in press) in a similar study with second and third grade struggling writers. The prompts for story writing included pictures of children or animals engaged in activities of interest to young children. Prompts for personal narratives were statements such as, “Write a paper about a time you had fun.” or “Write a paper about something that happened on the playground.” All the prompts were reviewed by a third grade teacher and two third grade students and found to be appropriate.

Instructional Procedures

An overview of instructional procedures is presented in the following section. Steps taken to ensure integrity of treatment are explained. Finally, a detailed description of the SRSD writing strategy and self-regulation techniques is presented.

Instruction

Participants were instructed individually three to four days a week in thirty minute sessions. Each participant stayed in instruction until reaching performance criterion. Criterion was defined as participants’ ability to independently write a story, with all seven parts, using the self regulation techniques and WWW, What = 2, How = 2 strategy without any prompts (chart with strategy steps, graphic organizer, or self-statement sheet). Detailed lesson plans can be found in Appendix A.

Fidelity and Quality of Treatment

Treatment integrity (lesson plans and steps of instruction) and quality of instruction (teacher-student engagement, student response, modifications made to meet the individual needs of students, transitions, teacher preparation, and lesson pace) were analyzed. Fidelity of treatment was established by assessing, measuring, and reporting the degree to which lessons were implemented as specified by the intervention protocol, and by examining the quality of instruction over time and over sessions (Gresham et al., 2000). Detailed lesson plans were followed for every lesson taught. Each step was checked off as it was completed for integrity of instruction per session. Ninety-seven percent of the steps in all lessons were checked off as completed.

All lessons were tape recorded and one third of the lessons were randomly selected and listened to by a trained graduate student to determine if the lesson was executed as planned. The graduate student was given tapes of all lessons and randomly selected 1/3 of all lessons to be evaluated. The percentage of steps completed across all lesson plans was .95. The overall quality of the lessons that were tape recorded were rated using a 5 point Likert-type scale, with a score of 1 representing low quality and a score of 5 indicating high quality (see Appendix B). The rater responded to the following five statements about the quality of instruction: Teacher engages student in discussion where indicated; Student responds to questions and contributes to discussion; Teacher modifies to student questions, answers, and needs appropriately; Teacher is well prepared, positive, and makes smooth transitions; and Lesson pace is appropriate. Quality of instruction across all lessons was rated as 5.0.

WWW Writing Strategy

A well-validated writing strategy, W-W-W-What =2, How=2, was embedded within the six stages of SRSD instruction: develop background knowledge, discuss the strategy, model the strategy, memorize the strategy, support the students' use of the strategy, and independent performance (Harris & Graham, 1999). Rose, Dennis, and John also learned to set goals, monitor and evaluate their progress, and use self-speech.

Instruction was divided into six units; each unit took at least one instructional session and as many as 5 to complete. An overview of each unit is described and the primary goals for each unit are stated in the following section. Detailed lesson plans can be found in Appendix A. In the following description, the six stages of the SRSD model will be highlighted in *italics* as they occurred during instruction.

Unit One. During the first unit of instruction, I introduced myself as the writing teacher. The students' *background knowledge* about story writing was determined through discussion of "what makes a story good". I also *discussed* with the participants what they do when they write. Next, I introduced a "trick" or strategy that good writers use to help them write, POW (Pick my idea; Organize my notes, and Write and say more). I used a chart with the mnemonic POW to discuss each part. Participants practiced the parts of the strategy, discussed goals for learning POW, and then began to discuss the parts of a good story. Next, I introduced the strategy, W-W-W, What = 2, How = 2 to help participants remember the seven parts of a traditional Western story. The students and I discussed each story part and students were encouraged to provide examples of each. Participants practiced finding the parts of a good story in a sample story. They also discussed the benefits of learning and using the strategies.

At the end of this unit, I explicitly *modeled* how to use a graphic organizer for story writing. Putting ideas in note form for each of the seven parts of a good story was also explicitly modeled. Students discussed the value of taking notes and gave examples of how note taking can be used in real life. A primary goal of unit one was to establish how writers use planning strategies and the benefits of using such strategies. Finally, and perhaps most importantly, each participant was asked to make a commitment to learn the strategy. This officially marked the beginning of the collaborative process between me (the instructor) and the students as they set out to become better writers.

Unit Two. During unit 2, POW and W-W-W, What = 2, How = 2 parts were reviewed and practiced. Students practiced finding story parts in a sample story I read aloud. I continued to explicitly *model* taking notes but in a more collaborative manner. Participants were encouraged to help me put our ideas into note form. The value and use of self-statements was discussed and modeled. Specifically, problem definition statements, coping statements, self-reinforcement, planning, and self-evaluation statements were modeled as I used POW and W-W-W, What = 2, How =2 to plan a story. Self-statements that matched the individual needs of each participant and his or her verbal style were utilized. After *modeling* self-statements, participants discussed statements they could use while they wrote and recorded these personalized statements on their self-statement sheets. All three participants initially had difficulty coming up with personal self-statements. We continued to work on developing self-statements throughout instruction.

Finally, I modeled how to write a story using POW, W-W-W, What = 2, How = 2, and self-statements from start to finish. Emphasis was placed on setting goals and

including all the parts for writing a good story, note taking skills, and the use of self-statements. I also modeled for the students how to improve their stories by using “million dollar words.” Million dollar words were defined as describing words and students were told they were words that help the reader create a more vivid picture in his or her mind of what they are writing about. For example, I modeled how to improve the description, “One day...” to “One humid afternoon in July.” All three participants showed evidence of using million dollar words. However, Dennis almost always started his stories with a sentence similar to the one I modeled during instruction.

In addition, I introduced a rocket graphing sheet (see Appendix C). I modeled how to self-evaluate by reading my story aloud and for each story element (who, when, where, what does the character do or want to do, what happens next, how does the story end, and how does the character feel) included, I shaded in a part of my rocket. When I had included all seven parts, I told participants, “I blasted my rocket!”

The primary goal for unit 2 was for the participants to see the value of using self-statements as we navigated our way through the writing process. The process of modeling was particularly important as the students witnessed the use of the strategy, step by step. The self-statements modeled were individualized to each participant in order to maximize the power of their utility. For example, John, who was always “too tired” to work, witnessed me using the same statement while I was working. He suggested, I try saying, “If I just do a little bit more, I can take a break.” Finally, self-evaluation was modeled using the rocket graphing sheet.

Unit 3. During unit 3, the parts of the two strategies were reviewed and participants were tested (no grade) on their ability to *memorize* the mnemonics.

Additional practice was provided until participants were able to remember all the parts and their significance. All three participants were able to memorize the mnemonics after one week of instruction.

Also during unit 3, generalization training began and was referred to as, “transfer.” Transfer was defined as using POW and W-W-W, What =2, How =2 with other kinds of writing such as book reports, summaries, word problems, and journal writing, in places other than the instructional setting. I stressed with each participant that only using the strategy with me, in the library, was not beneficial to their goal of becoming better writers. Specific examples of how to transfer and to what kinds of writing were generated by the participants. Rose, Dennis, and John committed to using the strategies in school, home, and for many different kinds of writing. They reported back their attempts to me several times a week. . Their transfer efforts were recorded on a transfer sheet (See Appendix D)

Finally, each participant continued to plan and write a story collaboratively with me. I led the process but participants contributed their ideas and helped me to organize my ideas. Dennis was particularly critical of my ideas and always came up with “better ones” for me to include. All three participants enjoyed the collaborative process and seemed most confident when working with me as a partner. The rocket graph continued to be utilized and each participant helped me determine if we had included all our parts. When we were missing a part, I modeled for the students how to go back and add a story part in and explained that even good writers have to go back and make additions sometimes to make a story better.

Unit 4. During unit 4, Rose, Dennis, and John continued to report and record transfer efforts. More control of the *collaborative* stories was given to participants. After one or two collaborative stories, I had participants look at a story they had written during baseline to establish prior performance. Prior performance was established at this point during instruction so students could compare their baseline story to their collaborative stories and make a goal for their next story.

After examining their baseline stories we also discussed ways to write a more interesting first sentence. I modeled for the students how to combine their ideas from their note page into one or two sentences. Specifically, we discussed how they could combine the setting, time, and place. We practiced making these revisions on their baseline stories.

Unit 5. During unit 5, students began to use the strategy more independently. I continued to *support* the use of the strategy by prompting Rose, Dennis, and John to utilize their self-statements and mnemonics; however, support was decreased as the students become more proficient at using the strategy. The primary goal of unit five was for each participant to become more independent in the writing process.

Unit 6. During unit 6, Rose, Dennis, and John learned how to make their own graphic organizer in order to eliminate the use of the provided organizer. They continued to graph each story, set goals, and report transfer efforts. They repeated this lesson until independence was reached. The primary goal for unit 6 was for each participant to independently write a story, with all seven parts using the POW and W-W-W-What =2, How = 2 writing strategies, as well as the self-regulation techniques without any prompts (charts with strategy steps, graphic organizer, or self-statement sheet).

Measures

In order to determine if SRSD instruction had a positive effect on participants' story writing skills and to establish if instructional effects generalized to a similar but different genre, personal narratives, several measures were used. Participants wrote stories during baseline, post-instruction, and at maintenance. A personal narrative probe was administered by the classroom teacher during baseline and one week after the post instructional story writing probes were administered. The personal narrative was administered in the classroom during language arts. The personal narrative probe was administered during the same time period (morning) as when story probes were administered. In addition, a self-efficacy measure was administered during baseline and post instruction to measure participants' self-efficacy for story writing. Finally, a social validity interview was conducted at the conclusion of the study to gather information about the perceived effectiveness of the intervention and recommendations for future use of the strategy.

In the following sections procedures for administering and scoring of all measures will be described. Further, a thorough description of each measure will be provided. Finally, the design of the study and procedures for analysis of the data will be addressed.

Procedures

Measures were administered by me, the classroom teacher, and a trained graduate student. Each participant was tested individually, in a space that was quiet and free from distractions. All assessments, with the exception of the holistic quality measure, were scored by me and two trained examiners who were blind to the purpose and design of the study. Testing procedures are described for each measure in the following section.

Scoring. Stories and personal narratives were typed before scoring and all identifying information was removed, based on Graham's (1999) finding judgments about writing quality can be made by assessing mechanical aspects of writing, such as handwriting legibility or number of spelling miscues. Spelling, punctuation, and capitalization were also corrected in order to minimize any bias that may have resulted during scoring.

Scorers were not told the purpose of the intervention or given details about instruction. They were trained to establish reliability and accuracy in each measure. During training, a presentation of testing procedures was explained. Controlled practice and independent scoring of each measure was also provided. Scores were discussed and when disagreement occurred on any item, an attempt to reach consensus was made. Reliability for each measure was established by dividing the scorer's agreements/number of probes for each measure. Table 3 contains the reliability of scoring for each dependent measure.

Story and Personal Narrative Prompts

Stories and personal narratives were written in response to prompts used by Harris, Graham, and Mason (in press) in a similar study with second and third-grade struggling writers who were not identified as EBD. The writing prompts were reviewed by two primary grade teachers and a second grade student and found to be appropriate in a previous study (Harris et al., in press). Equivalence of the prompts was also previously established (Harris et al., in press). The prompts were randomly administered to 132 second and third-grade students who were identified as at risk for writing problems. At risk for writing problems was defined as a score within two-thirds of a standard deviation

or more below the mean for a normative sample on the TOWL-3 Story Construction Subtest. No statistically significant differences between length and overall quality were found (p 's > .06).

Story prompts were administered by me at baseline, post-instruction, and maintenance. Personal narrative prompts were administered by the classroom teacher at baseline and generalization with the exception of one participant. John's post-instruction personal narrative measure was administered by me. For story writing, participants wrote in response to a picture prompt. The pictures were of children or animals engaged in activities of interest to young children such as children sled riding, two dogs paddling in a boat, and three children baking something. For personal narratives, participants were asked to write about a specific experience they have had (i.e., when they were younger, had fun, or were on the playground).

Participants had as much time as they needed to compose stories and personal narratives. They were told that the instructor could not provide help. If a participant was having trouble spelling a word they were told to "do the best you can." Stories and personal narratives were scored based on the number of words written, essential elements included, and holistic quality.

Number of words written. Length of stories and personal narratives was defined as the number of words written, regardless of spelling, which represented a spoken word. Typed versions of participants' stories and personal narratives were free of any spelling, capitalization, and punctuation errors. After participants wrote a story or personal narrative during assessment, they read their story or personal narrative aloud, so that any indecipherable words could be noted and eliminated from the final typed copy. If a

participant was unable to decipher a word, it was also deleted from the final typed copy. If a participant verbally added words that were not part of the original story or personal narrative, they were also not added. Overall length of all stories and personal narratives were scored using Microsoft Word “word count”, and me. Interrater reliability was calculated by dividing the number of agreements between raters by the number of total probes. This quotient was multiplied by 100 to calculate a percentage of agreement (Tawney & Gast, 1984). Interrater reliability for both stories and personal narratives was .99.

Number of essential elements. Stories and personal narratives were scored to establish the number of 7 basic story elements that were present. These included: character(s), setting, time, what the main character wants to do (goals), action to achieve goal(s), ending, and characters’ feelings. For each element, a score of 1 was awarded if that element was present and a 0 if it is not present. Scores could range from 0-7. Personal narratives were also scored using identical procedures because the narrative writing prompts ask students to write a story about a personal experience. All stories and personal narratives were scored by me and a second trained graduate student who was not familiar with the purpose or design of the study. Interrater reliability was calculated by dividing the number of agreements between raters by the number of total probes. This quotient was multiplied by 100 to calculate a percentage of agreement (Tawney & Gast, 1984). Interrater reliability for elements for stories and personal narratives were .96 and .95 respectively.

Quality. A holistic rating scale was used to measure the quality of all stories and personal narratives written during baseline, post-instruction, generalization, and

maintenance. Stories and personal narratives were scored using an 8-point holistic scale developed by Graham and Harris (1989). A score of 8 represents the highest quality of writing and a score of 1, the lowest. Two examiners, unfamiliar with the purpose and design of the study, were trained in using the holistic rating scale using practice stories written by second and third grade students not included in the study.

Procedures for scoring each story and personal narrative were based on Grahams' (1999) recommendations. First, examiners were told to read each composition carefully to gain a general impression of overall writing quality. They were instructed to take ideation, organization, sentence structure, grammar, and aptness of word choice into account before making a final judgment about overall quality. Examiners understood that no single factor should have received too much weight. In addition, examiners were provided with anchor papers of low, middle, and high quality for both stories and personal narratives. Anchor papers were obtained from a second and third grade classroom that did not participate in the study but were from the same school district. Two former elementary school teachers selected the best, average, and poorest quality stories based on the scoring criteria previously described.

Interrater reliability was calculated by dividing the exact number of agreements between raters by the number of total probes. This quotient was multiplied by 100 to calculate a percentage of agreement (Tawney & Gast, 1984). Interrater reliability for story and personal narrative were .87 and .89 respectively. For each genre, the final quality score was the average score of the two raters.

Self-Efficacy Scale

All participants were administered a self-efficacy scale developed by Graham et al. (1993) at baseline and post-instruction (see Appendix E). The twelve item scale measured participants' efficacy and attitude regarding story writing. Six of the items were administered to participants. These items measured a participant's self-efficacy for planning and writing a paper. These items were: When my class is asked to write, my paper is one of the best; When writing a paper, it is hard for me to decide what goes first, second, third, and so on; When writing a paper, I have trouble finding the right words for what I want to say; When I plan a paper, my plan is one of the best in my class; When writing a paper, it is hard for me to keep thinking of things to say; When I write, it is easy for me to get ideas for my paper. The remaining six items not included measured attitude and were: I would rather read than write; I do writing outside of school; I would rather write than do math problems; I do not like to write; I like to have my classmates read what I have written; and I write whenever I can.

In a previous study, Graham et al. (in press) conducted a factor analysis of the self-efficacy items to test their assumption that the self-efficacy items formed a single construct. The analysis resulted in two factors with eigenvalues greater than 1.0 (Graham et al., in press). Graham et al (in press) reported these two factors accounted for 48% of the variance. The items for the first factor were labeled, self- efficacy for Planning/Writing and items for the second factor were labeled self-efficacy for Generation/Organization. Graham et al. (in press) reported the alpha coefficient was .73 and .69 for the two factors respectively.

All items were administered according to guidelines recommended by Bandura and Schunk (1981). The administrator read each statement aloud and then the participant was asked to indicate agreement on the Likert-type scale. The scale had a range of 1 to 4. A score of 1 indicated a participant strongly disagreed with the statement and a score of 4 indicated a participant strongly agreed with a statement. Practice using the scale was provided by having each participant respond to statements regarding their ability to hop and juggle. Finally, participants were asked to take their time and to be honest in their responses.

The scale was administered by a trained graduate student who was unfamiliar with the purpose or design of the study. Scores were first calculated by me and then by a second trained examiner, unfamiliar with the purpose or design of the study. Scores for each factor were calculated by summing the score for each item and dividing by the number of items. Before summing the scores, the scores for items 6, 8, and 12 (which were worded negatively) were inverted (e.g., a score of 4 became a 1). A final score of 4 indicated a high level of self-efficacy and a score of 1 suggested a low level of self-efficacy for writing.

Test of Written Language (TOWL)

The Test of Written Language (TOWL-3, Hammill & Larsen, 1996) Story Construction subtest was administered by the classroom teacher to establish participants' writing level prior to beginning the study. Reliability for the TOWL-3 Story Construction subtest is .86. Students who scored within two-thirds of a standard deviation or more

Table 3

Scoring Reliability for Each Dependent Measure

Stories

Number of words written	.99
Number of essential elements	.96
Holistic Quality	.87

Personal Narratives

Number of words written	.99
Number of essential elements	.95
Holistic Quality	.89

below the mean for a normative sample were identified as at risk for writing and deemed potentially appropriate to participate in the study. Rose and John received a score of 8 which fell in the range of an average score (8-12) and Dennis received a score of 5 which fell in the poor range (4-5). Standard score results of the TOWL can be found in Table 2.

Experimental Design and Analysis

A multiple baseline across participants design with multiple probes in baseline only was used to determine if SRSD with explicit generalization instruction on story writing had differential effects on the writing behavior of three elementary students who were identified as EBD and struggle with writing. Participants were taught the SRSD story writing strategies individually, three to four times per week, for thirty minutes. Instruction concluded when each participant had met criterion. Criterion performance was defined as when a participant could independently write a story, with all seven parts, using self-regulation techniques and the W-W-W, What = 2, How = 2 strategy without any prompts (chart with strategy steps, graphic organizer, or self-statement sheet).

To maximize internal validity of the multiple baseline across participants design with multiple probes in baseline only, the following guidelines were adhered to: a minimum of three participants were studied; stable baselines were established before introducing the intervention; and the intervention was applied to one participant at a time, with subsequent participants beginning the writing intervention only after the preceding participant had shown a change in the dependent measure (Tawney & Gast, 1984).

As recommended by Tawny and Gast (1984), a minimum of three data points were required to establish a level of stability or trend of data. During baseline, once stability or decreasing trend was established, the writing intervention was introduced to

the first participant. All students were administered a baseline probe and a subsequent probe was collected from the remaining non-instructed participants until an instructed participant had established the criterion performance.

Baseline story probes. During baseline, the participants' pre-intervention response rates were established for writing stories. The leading dependent variable used to determine the rate was the number of essential story elements. Pre-intervention data for number of story elements were collected until stability or decreasing trend was established. A minimum of three data points was required to establish a level of stability or trend of data (Tawny & Gast, 1984). During baseline the instructor met with each participant and asked him or her to write a story about the picture prompt provided. Participants were told that the instructor could not help them but to do their best. They were given as much time as they needed to complete the story. Students never wrote more than one story or personal narrative in a day.

Instruction. Instruction for the first participant began after a stable baseline had been established. Instruction was criterion based and continued until the participant demonstrated independent mastery of the writing strategy and self-regulation procedures. No data were collected during instruction. The goal of instruction was for participants to meet criterion that was measured by my observation. Meeting criterion was defined as participants' ability to independently write a story, with all seven parts, using self-regulation techniques and WWW, What = 2, How = 2 strategy without any prompts (chart with strategy steps, graphic organizer, or self-statement sheet). Introduction of the intervention did not begin with each subsequent participant until the previous participant

has established stability or an increasing trend on post instructional probes. Identical procedures were used for participants two and three.

The length of sessions required to meet criterion varied for each participant. Rose reached criterion after criterion after 25 instructional sessions (12.5 hours). Dennis met criterion after 20 sessions (10 hours). John met criterion after 19 sessions (9.5 hours).

Post-instructional story probes. A minimum of three post-instructional story probes were administered immediately following instruction to assess each participant's mastery of the writing strategy and self-regulation procedures. The leading dependent variable used to establish a level of stability or trend of data was the number of essential elements. A minimum of three data points was required to establish a level of stability or trend of data (Tawny & Gast, 1984). All three participants established stability after 3 probes.

Generalization probe. All participants were administered a generalization writing probe, personal narrative, at baseline and one week following the post-instructional story probes to determine if effects of the story writing strategy and self-regulation procedures would generalize to personal narrative writing. The personal narrative probe was administered by the classroom teacher in all cases but one. Due to the time constraints of the study, participant three was administered his post generalization probe by me at his day care center.

Instructions for completing the personal narrative were identical to those used with stories in the baseline and post-instructional phase with the exception of using the word, "story". Students were asked to write a "paper" about a given topic. For example, they might be asked to write about a time they had fun.

Maintenance story probes. One maintenance story probe was administered to each participant 2 weeks following the completion of post-instructional probes to determine if participants maintained instructional effects. Instructions were identical to the baseline and post-instructional probes.

Social Validity

Social validity is essential in assessing the viability of intervention research. Interventions which are unmanageable in practice are unlikely to be adopted or maintained by students or teachers. Three methods were used in the current study to examine the social validity of the intervention. First, participants were interviewed by me, at the conclusion of the study, regarding the perceived effectiveness of the intervention, their recommendations, and other feedback. A copy of the interview can be found in Appendix F. In addition, I kept a log of participants' comments and behavior throughout instruction regarding the use of the intervention. Finally, participants kept a record of their efforts to use the writing strategies in other settings and for different kinds of writing. Responses to the social validity interview are analyzed descriptively in Chapter 4. Additionally, discussion of my informal observation of participants' behavior during instruction is addressed. Finally, comments regarding participants' records of generalization attempts are presented.

CHAPTER 4

Results

A story writing strategy, W-W-W, What = 2, How = 2, was taught to three second and third grade students identified as EBD. It was hypothesized that the overall length, number of essential elements, and quality of their stories would improve as a result of instruction. Participants were also explicitly instructed on how to generalize the strategy to other types of writing and other settings. Effects of generalization training were measured using a personal narrative probe. It was also hypothesized that participants' overall self-efficacy about writing would improve as a result of instruction. Finally, a social validity questionnaire was administered to all three participants. Results of the current study will be presented in this chapter. The results are organized by baseline, post-instruction data, self efficacy, and social validity.

Analysis of Baseline Data

The leading dependent variable used to determine participants' ability to move from baseline to instruction was the number of essential elements included in their baseline stories. During instruction, participants were taught to include the following essential elements in their stories: main character(s), setting; time; what the main character(s) want to do (goals), action to achieve goal(s), ending; and character(s) feelings. For each story element, a score of 0 was given if the element was not present and a score of 1 was given if the element was present. A maximum score of 7 was possible.

A minimum of three data points were required to establish a level of stability or trend in the data. A range of 3 – 6 story probes were used with the participants to achieve

stability. Rose was administered 3 baseline story probes. Dennis was administered 5 baseline story probes and John was administered 6 baseline story probes. Figure 1 visually represents these data. The order of participants was determined by the classroom teacher.

Essential Elements

Participants' weaknesses in writing were further verified by baseline performances. During baseline no participant exceeded a total score of 3 essential elements out of 7 (see Figure 3). Participants average scores on story elements during baseline was 1.7, 2.4, and 1.7 respectively (see Table 4).

The only essential elements included in stories written at baseline were the main character, setting, and a description of what the character wanted to do (goal). In 92% of the baseline stories a character was mentioned but the character never was given a name or developed. For example, in 6 of the 14 total baseline stories, the character was referred to as, "I", "he" or "they." After telling who the character was, telling what the character wanted to do or was doing (goal) was described most often (64%). However, this description was usually limited to one sentence telling what the people or animals were doing in the picture prompt. For example, one participant wrote, "Dogs are falling" in response to a picture of two dogs with parachutes who are jumping out of an airplane. The setting of the story was described in 36% of the baseline stories. None of the participants included any of the 4 other essential elements (when the story took place; action to achieve goal(s); ending; or characters' emotions).

Stable baselines or declining baselines were established for each participant (see Figure 3). Rose and Dennis both had fairly stable baselines; 2, 2, 1 and 3, 3, 2, 2, 2

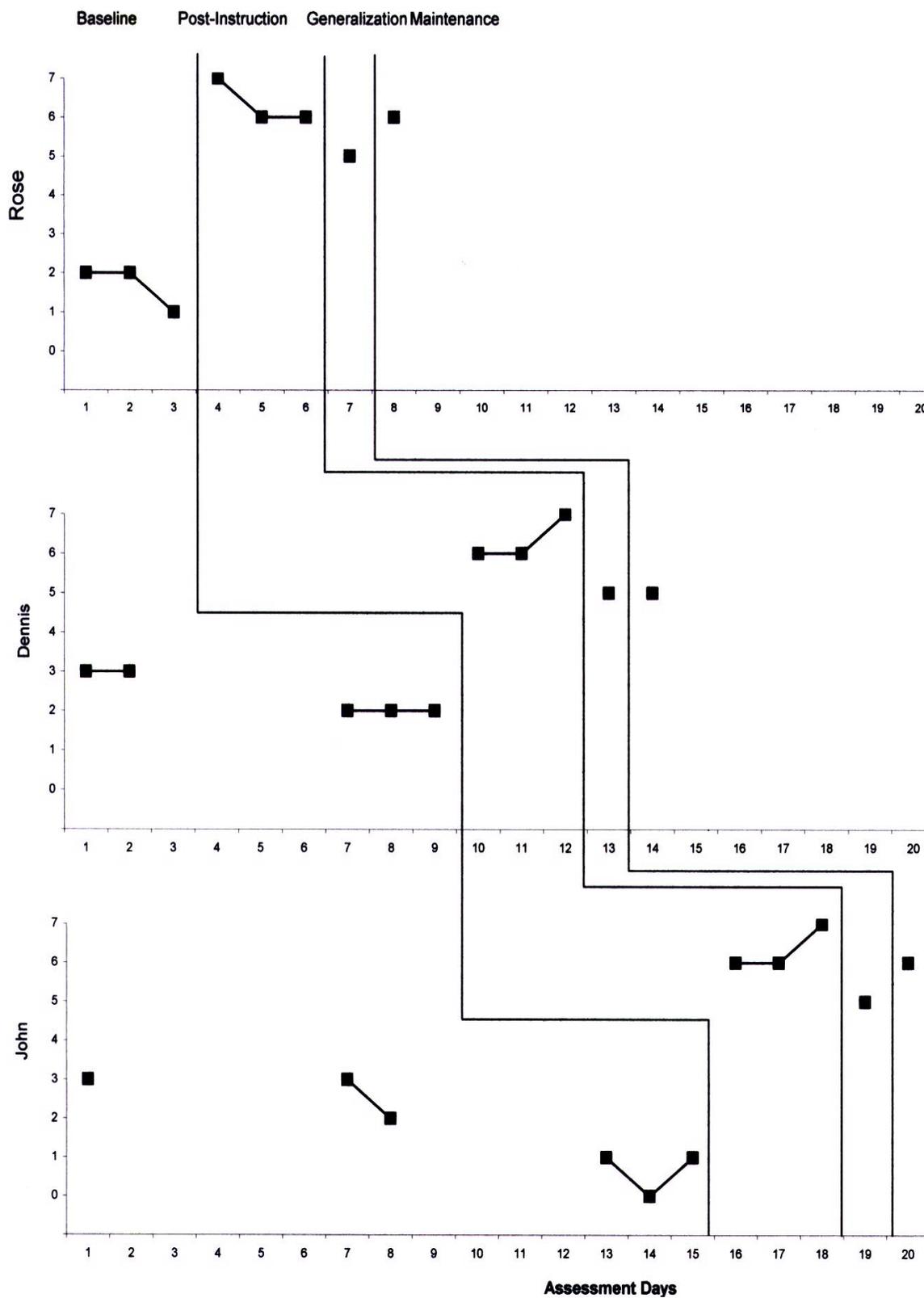


Figure 3. Participants' Score on Essential Elements

respectively. John consistently declined over the course of six stories written during baseline with the exception of a one point increase from his fifth to sixth story (see Figure 3). There was no evidence of significant increases in number of essential elements included in baseline stories for any of the participants after the intervention was introduced to other participants.

Number of Words

None of the participants wrote at great length during baseline (see Figure 4). No one exceeded 16 words or wrote less than 3. Rose, Dennis, and John's combined average across all stories written during baseline was 7.7 words. A closer look at individual averages does not reveal much variability between Rose, Dennis, and John (6.6, 9.2, and 7.3 respectively (see Table 4).

However, both Dennis and John exhibited some variability in the number of words they wrote individually during baseline. Dennis had a difference of 11 words between his shortest and longest story. His shortest story was five words, a difference of 11 is somewhat significant in that it doubled his smallest score. John's scores steadily decreased in the following order, 13; 13; 5; 3 (See Figure 4). For Rose there was only a difference of 4 words between her shortest and longest baseline story.

Despite the small amount of variability in participants' length of baseline stories, all participants obtained a stable or decreasing baseline (see Figure 4). In addition, none of the participants exhibited an increase in the number of words written when the writing intervention was introduced to participants who had not yet started the writing intervention.

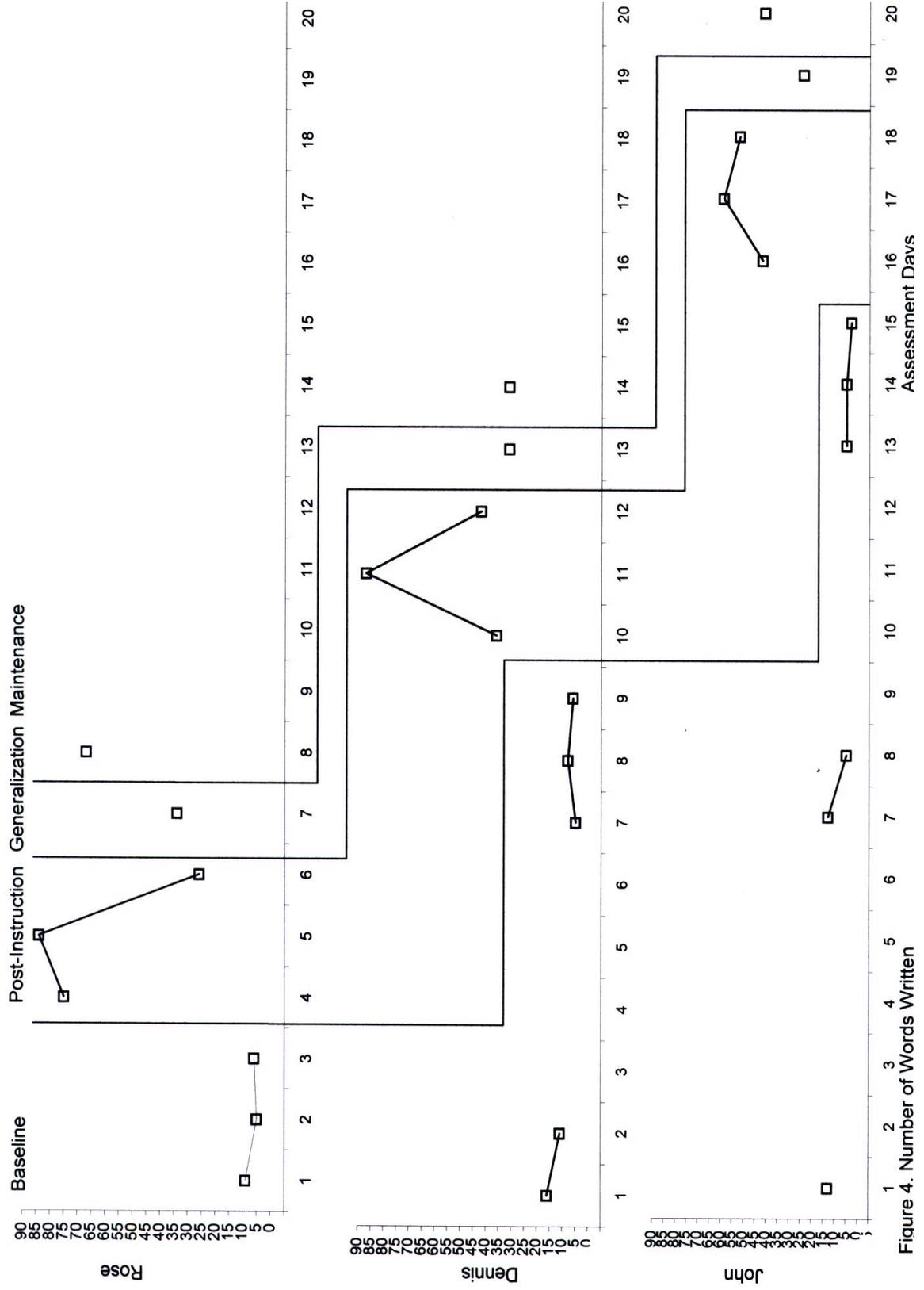


Figure 4. Number of Words Written

Quality

Overall, the quality of baseline stories was poor. No participant received a score of more than 2 out of a possible score of 8 (see Figure 5). The overall average across all baseline stories written was a score of 1. With the exception of Rose, whose baseline performance stabilized, at a low level, both Dennis and John exhibited a decreasing trend. John's quality scores were the lowest of the three participants and just as the number of words he wrote decreased throughout baseline, so did his quality score. His scores were 1, 2, 1, 0, 0, and 0. Of his last three baseline stories, two were single sentences that merely described the picture (e.g., "The picture is about basketball.") and one was an incomplete sentence ("Beauty and the beast"). Similarly, Dennis' stories decreased in quality throughout baseline. His scores were 2, 2, 1, 1, and 0.

Self-Efficacy

Each participant was administered a self-efficacy measure during baseline and post-instruction. A trained graduate student, unfamiliar with the design and purpose of the study, administered the measure during baseline for all participants. Results of the self-efficacy measure can be found in Table 5.

Results of the first factor, self-efficacy for planning/writing, were moderately high. Rose and John's efficacy for planning/writing scores were above the mean (3.66 and 3.0) and Dennis was just under the mean (2.33). Results of the pretest indicated that all three participants were generally positive about their abilities to plan and write. Results of the second factor, self-efficacy for generation/organization were lower. Rose scored closest to the mean (2.33) however, both Dennis and John scored in the low range

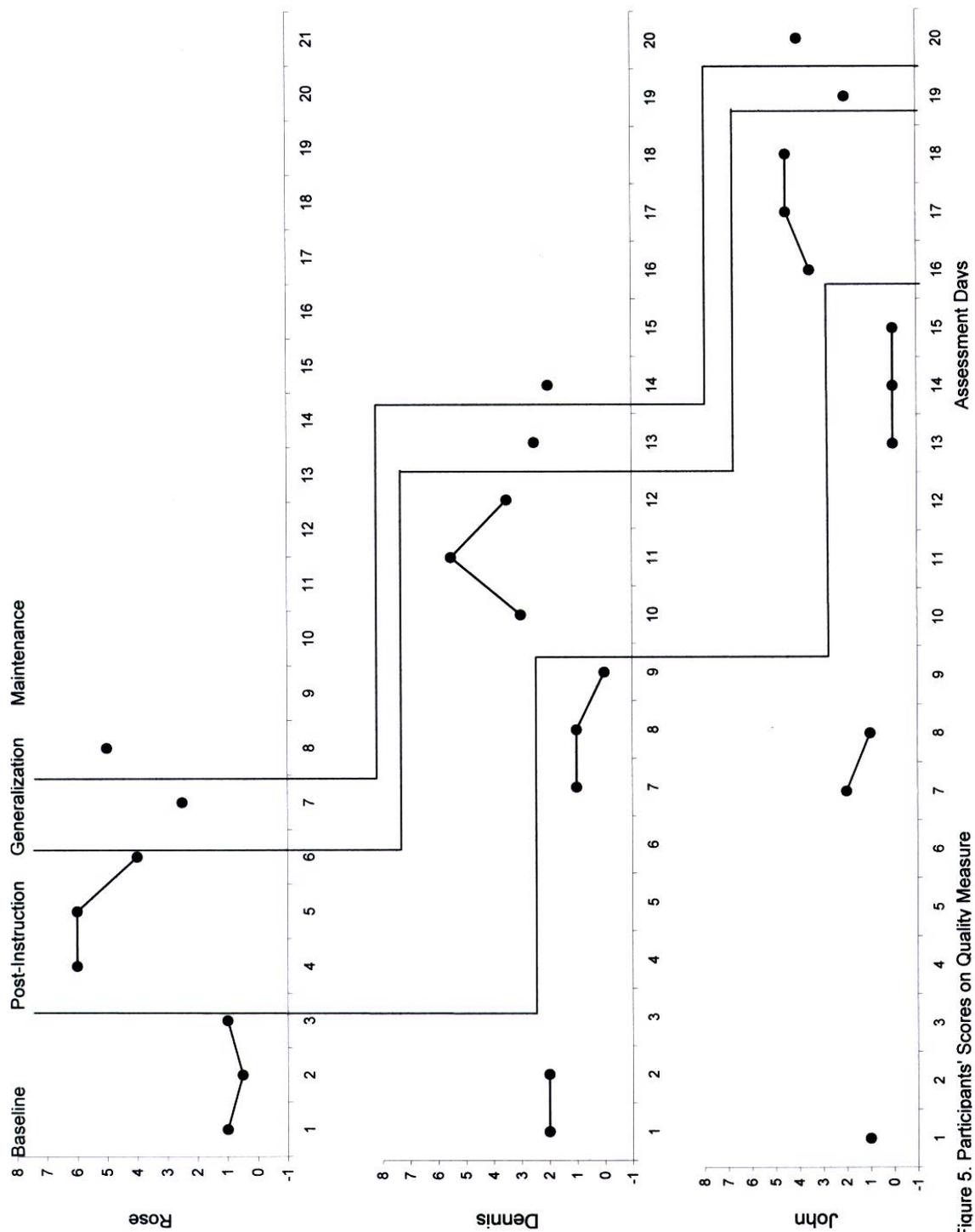


Figure 5. Participants' Scores on Quality Measure

with scores of 2.0 and 1.0 respectively. Pre-test results appeared to indicate that all three participants had more confidence in their abilities to plan and write a story than to generate and organize their stories.

Analysis of Post-Instruction Data

Essential Elements

SRSD instruction in story writing had a positive effect on the inclusion of story elements in participants' post-instruction stories (See Figure 3). On average, the number of essential elements included in post-instruction stories doubled and tripled for all three participants (see Table 4). Both Rose and John exhibited an average increase of 66% and Dennis increased his number of essential elements by 56%. None of the participants scored lower than a 6 out of 7 and each participant scored a 7 out of 7 one time. With the exception of one post-instruction story, all three participants included characters, a setting, and time the story took place for all post-instruction stories. The element most frequently absent (3 times) was an ending. In two instances, participants failed to include a description of a character's emotions. In one story, a participant failed to include an action related to the goal in the story. Overall, Rose, Dennis, and John showed significant improvement in the inclusion of essential elements in their post-instruction stories.

Number of Words

SRSD in writing had a positive effect on the number of words written from baseline to post instruction for stories (see Figure 4). Rose, Dennis, and John increased their average number of words written at baseline to post-instruction by 55, 46, and 43 words, respectively. However, when looking at individual scores, greater variability occurred at post-instruction testing than baseline for number of words written.

Table 4

Participants' Average Scores during Each Experimental Condition

Participant	Baseline	Post-Instruction	Generalization	Maintenance
<u>Rose</u>				
Elements	1.7	6.3	5	6
Words	6.6	61.6	34	67
Quality	.83	5.33	2.5	5
<u>Dennis</u>				
Elements	2.4	6.3	5	4
Words	9.2	55	31	31
Quality	1.2	4	2.5	2
<u>John</u>				
Elements	1.7	6.3	5	6
Words	7.3	51	24	41
Quality	.66	4.16	2.5	5

Table 5

Participants' Individual Scores on the Self-Efficacy Measure

Planning/Writing	Baseline	Post-instruction
<hr/>		
Participant		
Rose	3.66	4.0
Dennis	2.33	3.0
John	3.0	3.66
Generating/Organizing Ideas		
Participant		
Rose	2.33	1.0
Dennis	2.0	3.0
John	1.0	2.0

Note: Scores range from 1-4.

Both Rose and Dennis had differences between their shortest and longest stories of 58 and 51 words respectively. John's number of words written was fairly stable (42, 59, and 52) throughout post-instruction story writing.

Quality

SRSD in writing improved the overall quality of stories written from baseline to post-instruction (see Figure 5). Average quality scores increased for Rose, Dennis, and John by 4.5, 2.8, and 3.5 respectively. All three participants' post instruction quality score averages fell in the average range (5.3, 4, and 4.16) when compared to stories written by second and third graders in the same school system. This was a significant increase when compared to their baseline averages (.83, 1.2, and .66) which fell in the poor range (see Table 4).

Self-Efficacy

Each participant was administered a self-efficacy measure after his or her post-instruction story writing probes were finished. The measure was administered by a trained graduate student, unfamiliar with the purpose and design of the study with the exception of one time. Due to the change of setting that occurred for John, the self-efficacy measure was administered by me upon completion of his post-instructional probes.

All three participants exhibited a moderate increase on factor one, self-efficacy in planning and writing. Increases from baseline to post-instruction were 0.34, 0.67, and 0.66 respectively. The range of scores was 3.0 – 4.0 indicating students were very positive about their abilities to plan and write. Each participant's baseline and post-instruction scores can be found in Table 5. Self-efficacy for generating/organizing

increased for two of the three participants. Dennis and John increased one point each to scores of 3.0 and 2.0 respectively. Rose decreased over a point from a pre-test score of 2.33 to a post-test score of 1.0.

Generalization Data

Each participant was administered a generalization measure by his or her classroom teacher during baseline and post-instruction with the exception of John. Due to the change in setting that occurred for John, his post instruction generalization probe was administered by me. The generalization probe was a personal narrative prompt and participants received identical instructions to the story writing prompt with the exception of being asked to write a story, they were asked to write a paper about the prompt. Gains from baseline to post-instruction were not as large as for stories. However, Rose, Dennis, and John all made progress.

Essential Elements

As exhibited in Table 6, the SRSD strategy in writing had positive effects on participants' inclusion of essential elements in a personal narrative during post-instruction testing compared to baseline. During baseline testing, no participant exceeded a score of 3 essential elements out of 7 on the personal narrative probe. At post-instruction Rose, Dennis, and John each earned a score of 5 out of 7. These scores were slightly below their scores on stories during post-instruction (see Figure 3). However, when compared to the number of essential elements included in baseline stories, all three participants doubled the number of essential elements included.

Number of Words

There was also an increase in the number of words written from baseline to post-instruction on the generalization probe (personal narrative). At baseline, Rose, Dennis, and John's personal narratives were 5, 8, and 10 words long respectively. At post-instruction, their personal narratives were 34, 31, and 24 words long respectively. While these are meaningful increases in length, the results are somewhat tempered when compared to the length of participants' post-instruction stories. All three participants wrote significantly fewer words on the personal narrative at post-instruction than they did on stories at post-instruction. John wrote only half as many words on his post-instruction personal narrative compared to his post-instruction story. Rose and Dennis both wrote nearly half as many words compared to their post-instruction story averages.

Quality

While results for length and essential elements for post-instruction generalization probes (personal narratives) indicated meaningful improvement, quality scores for Rose, Dennis, and John on post-instruction generalization probes (personal narratives) were poor (see Figure 5). Rose, Dennis, and John received quality scores of 2.5, 2.5, and 2 respectively on their post-instruction generalization probes (personal narratives). These scores were in the poor range when compared to the average personal narratives written by second and third graders in the same school district. However, their post-instruction generalization scores more than doubled their baseline scores. During baseline Rose, Dennis, and John each earned a quality score of 1.

Table 6

Baseline Generalization and Post-Instruction Generalization Scores

Participant	Baseline Generalization	Post-Instruction Generalization
<u>Rose</u>		
Elements	3	5
Words	5	34
Quality	1	2.5
<u>Dennis</u>		
Elements	3	5
Words	8	31
Quality	1	2.5
<u>John</u>		
Elements	2	5
Words	10	24
Quality	1	2

Note: Elements scores were on a scale of 0-7; Quality scores were on a scale of 0-8.

Maintenance

Two weeks following post-instruction testing, a maintenance probe was administered to each participant to measure the effects of SRSD in story writing over time. The maintenance probe was administered by me and students were asked to write a story using a picture prompt. Directions were identical to those used during baseline and post-instruction testing. Visual inspection of the data indicated that both Rose and John maintained similar effects compared to their post-instructional performance (see Figure 4). However, Dennis's performance decreased slightly.

Essential Elements

Rose, Dennis, and John all maintained a significant increase in the number of essential elements included in stories written at maintenance (see Figure 3). Rose earned a score of 6 out of 7 on her maintenance story. This was consistent with her post-instruction stories which earned scores of 7, 6, and 6 respectively. John obtained a score of 6 out of 7 on his maintenance story. His score was also consistent with his post-instruction scores (6, 6, 7). Dennis received a score of 5 out of 7 at maintenance. This was slightly below his post-instruction scores (6, 6, 7) but still a meaningful increase compared to his baseline scores (3, 3, 2, 2, 2).

Number of Words

All three participants maintained meaningful gains on the number of words written from baseline to maintenance testing (see Figure 4). Rose wrote stories that were on average 6.6 words long at baseline and 61.6 words long at post-instruction. At maintenance, she wrote a story that was 67 words long. Dennis wrote stories that were on average 9.2 words long at baseline and 55 words long at post-instruction. His

maintenance story was 24 words shorter compared to his post-instruction average. John wrote stories that were on average 7.3 words long at baseline and 51 words long at post-instruction. His maintenance story was shorter (41 words) but by only 10 words.

Rose exhibited the least amount of variance in the number of words written from post-instruction to maintenance. Her average difference was less than 5 words. John showed some variance but his difference was only an average of 10 words from post-instruction to maintenance. Dennis exhibited the greatest amount of variance in the number of words he wrote. His average at post-instruction for stories was 55 words, and dropped at maintenance to 31.

Quality

Positive gains in quality at maintenance testing compared to post-instruction stories were sustained for both Rose and Dennis (see Figure 5). They both remained in the average range for quality with scores of 5 and 4 respectively. However, Dennis experienced a significant decrease in quality at maintenance. He went from an average quality score of 4 at post-instruction to a 2 at maintenance. While his maintenance score nearly doubled his baseline story quality average of 1.2, it was still in the poor range when compared to other third grade students from the same school district.

Social Validity

Social validity was measured using three devices. First, I kept a log throughout instruction of things Rose, Dennis, and John said during instruction. The purpose of my log was to informally gauge how they felt about using the strategies on a daily basis. Anecdotal records of their behavior and responses to instruction helped me to determine how instruction was going and if each one thought the instruction was meaningful.

Second, all three recorded their efforts to generalize the writing strategies to other types of writing. Generalization was described to participants using the word, *transfer*. Their goal was to *transfer* what they were learning about writing while working with me to other places and types of writing. Finally, Rose, Dennis, and John were interviewed, individually, at the conclusion of the study about the perceived effectiveness of the intervention.

Log of Participant Comments

During instruction I noted in my log specific areas of weakness each participant was experiencing and how it was handled. One area of weakness for Rose, Dennis, and John was staying on task. Each struggled with the physical act of writing. I noted interest in writing decreased when the amount of time required by each of them to write independently increased.

For example, during collaboration when we shared the responsibility of writing a story, participant interest was high. Rose, Dennis, and John all were actively involved without much prompting. They were excited to develop a story and enjoyed reading and listening to their final products. In contrast, when the act of writing the story was gradually given over to each one, I was met with great resistance. Rose made comments such as, “I can’t do no more” and “I’m tired.” Dennis was noted to say when frustrated, “POW is stupid.” My notes also indicated more physical cues with Dennis. He was prone to putting his head down and rolling his eyes when frustrated with the task. John made the transition to independent writing the most easily but still voiced his frustration with comments such as, “how much longer do I have to write?” and “are we done yet?”

In addition to my anecdotal notes, Rose, Dennis, and John each kept a record of their transfer efforts. Throughout instruction, I stressed the importance of taking what they learned about writing while working with me in the library and applying that knowledge in other places and on different types of writing tasks. We brainstormed different writing tasks to which they could apply the strategies. Some example Rose, Dennis, and John suggested were, book reports, journal writing, morning board work, science, social studies, and writing at home. We also discussed how to think about the parts of a good story while reading and being read to and to even think about the parts of a good story when watching their favorite movies. Once a week, we recorded their efforts to transfer on a “transfer sheet” (see Appendix D). Early in instruction, Rose, Dennis, and John did not have much to add to their transfer sheets. They would respond to my inquiries with statements like, “I forgot” or “I don’t know.” Eventually, after repeated discussion about places and times they could use their strategies I began to hear more responses.

For example, Rose’s transfer sheet included the following statements about her transfer efforts: “I wrote about snakes”; “I thought about W-W-W while watching Bear in the Big Blue House”; “I wrote about fish”; “Solving math story problems”; and “Writing my book report.” Dennis included on his transfer sheet: “in my journal”; “during seat work”; and “book report.” John had the most difficulty responding. Most of his responses indicated times he wrote stories at home. He brought in his journal to share a story he wrote with me at home.

Social Validity Interview

Finally, at the end of instruction, students were interviewed regarding their perceived effectiveness of the intervention, their recommendations, and other feedback. A list of the questions asked during the interviews can be found in Appendix F.

When participants were asked “where can you use POW and what can POW help you do?” and “where can you use W-W-W, What =2, How =2 and what can it help you do?” all three participants gave examples related to writing and indicated POW and W-W-W could be used in places other than school. Rose indicated she could use POW to help complete her homework and class work and that it could be used “anytime and everywhere.” Her latter comment was something I said repetitively throughout instruction as a means to emphasize the strategies they were learning could be used with many types of writing and in many places. John also added that POW could be helpful when he was using the computer to write. Dennis indicated he could use POW and W-W-W to “help me write and say more, pick my ideas, and write my notes.” These were all three important instructional components.

When students were asked where and when they could use self-statements and what they helped them to do, participants responded they could use them at home or school. In response to how it helped them, Rose replied, “it helps me get my work done and try not to give up.” Similarly, Dennis responded, “They helped me realize I could do it and it won’t be so hard and I can get it (writing) over with.” John responded, “It helped me when I got frustrated. I wrote more better.”

When I asked students, “if you were the teacher, would you teach POW and W-W-W, What =2, How = 2 to your students?” Rose and Dennis responded, “yes” and

explained that POW and W, W, W, What =2, How =2, was fun. Dennis further explained that POW and W, W, W, What =2, How =2 “can help kids learn and write stories.” John said he would not teach the strategies to other kids but, when asked, offered no explanation for why.

When participants were asked, “If you did teach POW and W, W, W, What =2, How =2 to other students, what would you do the same?” Rose replied, “I liked talking about the stories and feelings.” Dennis replied, “I would help the kids write.” Dennis is most likely referring to the help he was given during collaboration when we would take turns writing. The physical act of putting pencil to paper was especially difficult for him. During collaboration he could orally tell me a story, getting all seven parts and a tremendous amount of detail; when asked to write independently, his efforts decreased significantly. John offered no response and merely shrugged his shoulders when asked the question.

When participants were asked to describe what they liked and disliked about POW and W, W, W, What =2, How =2 they were not very specific in their replies. They indicated that it “would help kids write”; “it was fun”; “I had a great time”; and “I liked getting help.”

One self-regulation component that students responded to with great enthusiasm was the rocket graphs. All three participants indicated they liked using them. Dennis said, “It’s cool and gave me strength. It gives me the power to write some more. It makes me feel perfect when I look at the rockets.” John indicated he liked filling them out himself and Rose said she enjoyed “blasting them.”

In regard to what they liked or disliked about self-statements, all three participants indicated that it was difficult to remember when to use them. Rose also added that they were fun and she would keep using them. Dennis said, “I thought they helped me.”

The final question asked was, “Overall, did you think the POW and W, W, W, What =2, How =2 strategies helped you to write better stories?” All three responded with a resounding, “yes.” However, other than Rose who added “Yes, because I wanted to write a story from beginning to end,” when asked, neither Dennis nor John gave any further explanation.

Summary

Results of the data analysis indicated that all three participants performed meaningfully better at post-instruction and maintenance than baseline on the story writing probes. They wrote stories that contained more essential elements, were longer, and were of overall better quality. For the generalization probe (personal narrative) Rose, Dennis, and John wrote personal narratives that had more essential elements, were longer, and of overall better quality than their baseline personal narratives. However, personal narrative quality scores at post-instruction were poor compared to quality scores on stories at post-instruction.

Self-efficacy scores indicated that participants’ self-efficacy for planning/writing was enhanced by SRSD instruction in story writing. Results of factor two, self-efficacy for generating and organizing ideas were not as high. However, for Dennis and John meaningful gains were made.

Participants’ responses to the social validity questionnaire indicated that SRSD in writing had a positive impact on participants’ perception of improvement in writing

performance. In addition, informal observation of Rose, Dennis, and John during instruction indicated the SRSD intervention had a positive impact on their ability to write a story.

A more detailed discussion of the results is presented in Chapter 5. First, the research questions are addressed. After, the limitations of the study, implications for teaching and research, and conclusions are discussed.

CHAPTER 5

Discussion of Results

Students with EBD often experience academic deficits in addition to their social and emotional difficulties (Kauffman, 2001). Unfortunately, their academic problems often are considered secondary to their behavioral problems (Gunter & Denny, 1998). The purpose of the current study was to implement an empirically based intervention that would primarily address the academic needs of students with EBD in the area of writing; however it contained components to address their behavioral needs as well. The powerful effects of using SRSD in writing are well supported in the literature with students with LD and low achieving students (Graham & Harris, 2003). However, the effects of using SRSD in writing with students identified as EBD had never been examined.

In a report presented by the National Commission on Writing in American Schools and Writing, the commission reported, writing is the most neglected of three R's in today's schools for all students, yet it is critical to their success (2003). They identified the need for effective instructional procedures in the area of writing, especially for those who struggle with writing the most (2003).

Results of the current study indicated that SRSD in writing is an effective intervention for students identified as EBD who struggle in the area of writing. Rose, Dennis, and John all wrote stories that were longer, contained more essential elements, and were of overall better quality at post-instruction and maintenance compared to their baseline stories. In addition, they generalized these effects to an additional genre, personal narratives, by writing personal narratives that were longer, contained more

essential elements, and were of overall better quality at post-instruction compared to personal narratives written during baseline. Results of the generalization probe were further strengthened in that they were obtained in a setting other than working with me. Rose and Dennis' classroom teacher administered the personal narrative probe in their classroom. I administered John's personal narrative probe at his daycare center. Finally, Rose, Dennis, and John found the strategies to be helpful and valued their impact on their writing. Self efficacy on both factors improved with the exception of Rose. She made gains on factor one but her self-efficacy for generating/organizing ideas decreased significantly from pre to post-test.

One instructional change worth mentioning before addressing each research question was my decision to teach all three participants to use self-statements before they evaluated a story written during baseline. During the pilot study, participants did not learn to use self-statements until after prior performance had been established. During the pilot, I found this was detrimental to participant's motivation and overall self-esteem. Their stories written during baseline were poor, containing only 2 or 3 essential elements. When students were asked to self-record their results on their rocket graphs and discuss how to improve their stories, they became very upset. Rather than using these stories to set goals to improve and help to establish a commitment to learn the strategies, they seemed less motivated to write and made statements such as, "I'm stupid" and "I can't do this."

In the current study I decided to teach the students self-statements before establishing prior performance. In addition, I had the students graph 1 or 2 stories written collaboratively on their rocket sheets before graphing stories they wrote during baseline.

This change was very beneficial. All three participants experienced a moment of self-doubt and disappointment when graphing their baseline story. However, I quickly explained they had not learned the strategies to write a good story and to look at the stories they had written since learning the strategies. I also prompted participants to use a self-statement to deal with their frustration and disappointment. This discussion along with using a self-statement seemed to help each participant to persist with writing longer and feel good about themselves as writers.

Finally, a goal of the current study was to implement a quality intervention that would apply the recommendations outlined in the review of intervention research in Chapter 2. A large percentage of studies in the past failed to give detailed descriptive data, often leaving out the sex, age, ethnicity and socio-economic status of the participants. Further, many studies failed to include plans for maintenance or generalization. The current study addressed each of these weaknesses.

First, the descriptive data in this study was thorough and detailed. No ambiguity about who these participants were is evident. In addition, a detailed summary of each participant's academic and behavioral characteristics was provided. Their identification as EBD was verified and reported. Second, a thorough description of the intervention and how it was implemented was described. Steps were taken to ensure high quality instruction was implemented through treatment fidelity. Third, plans for generalization and maintenance were made prior to beginning the study and were followed through.

In conclusion, while only three participants were included in the study, this was the first time SRSD had been exclusively tried with EBD students. As described in Chapter one, the EBD population is small and finding large numbers of participants to

include in the study was a challenge. However, due to these two factors, using single-case design was the optimum choice for this intervention.

Research Questions

The purpose of the current study was to find out if SRSD in story writing could be an effective intervention for students identified as EBD who struggle in the area of writing. The eight questions posed in Chapter 1 regarding the effectiveness of the intervention are addressed first. Next, limitations of the study, implications for teaching and research, and conclusions are discussed.

Story Writing Effects

Questions one through three addressed the effects of teaching SRSD to students with EBD in the area of story writing. Specifically, the number of essential elements, words written, and overall quality were examined to measure the improvement from baseline to post-instruction. In addition, a maintenance measure was administered to each participant to determine if the effects were maintained over time.

Essential elements. Rose, Dennis, and John all wrote stories with more essential elements at post-instruction and maintenance. During the *background knowledge* phase of instruction, I discussed with the students what a story should include. Their responses did not reach far beyond the characters. They appeared not to have a schema for parts of a story. This was evident in their baseline stories which almost always contained a character but he/she was never given a name or developed. In contrast post-instruction stories included one or more characters that were always named and were sometimes developed. In addition, there was action in their post-instruction stories that was not

evident during baseline. Instead of a one sentence description of the picture prompt, they wrote stories that had a beginning, middle, and end.

One informal observation worth noting was the improvement of Rose, Dennis, and John's topic sentences. During instruction, developing an interesting first sentence was emphasized and I repeatedly modeled for students how to incorporate a description of the time and place in the first couple of sentences. Dennis really picked up on this technique and almost always started his stories by describing the time and place. For example, he wrote, "On a windy day, Ms. Adkins and Rasheed was playing 1 on 1 basketball on the basketball court." This was much more elaborate than his baseline stories which never contained a description of the time the story took place. Similar instances occurred with Rose and John, especially during instruction. For example, Rose wrote during instruction, "It was 6:30 pm on a summer Thursday night in South America and no one was outside." Once they learned the parts to a good story they became very concerned and diligent about including all 7 of them in each story.

One final note about the number of essential elements related to the instructional phase was establishing participants' prior performance. Based on my experiences during the pilot study, I decided to wait to establish prior performance after Rose, Dennis, and John had learned to use self-statements and they had the opportunity to write at least one story collaboratively in the current study. To establish prior performance each participant reviewed a story they had written during baseline and they graphed the number of essential elements they got onto their rocket graphing sheet. All three participants were upset by their baseline performance.

However, in each instance I had each participant compare the results of their baseline performance to the story they had written collaboratively and explained that it was ok that they did not get many parts on their first stories because they had not learned the “tricks” to good writing yet. In all three instances this discussion helped. However, all three wanted to the opportunity to revise their initial story in order to improve the number of essential elements. I believe this helped the students make the commitment to learning the strategies and I often pulled out these baseline stories as a means for explaining how much progress each participant was making throughout the instruction. It was particularly helpful on days when motivation to write was low.

Number of words written. Rose, Dennis, and John all wrote significantly more words during post-instruction stories, personal narratives, and maintenance compared to baseline performance. Their stories, on average, were 7-9 times longer at post-instruction compared to baseline. During baseline there were only two instances when a participant wrote more than one sentence.

One informal observation I noted during baseline was the desire of all three participants to get the writing task over with as quickly as possible. They seemed to enjoy the novelty of leaving their class with me but did not enjoy the writing task. All three struggled with spelling during baseline testing and seemed upset that I could not help them with spelling, even though I assured them not to worry about spelling and just do the best they could. John became so upset that he began to cry.

The physical act of writing was a struggle during instruction as well. During the early stages of instruction I often let the students dictate parts of their stories to me. For example, I would have them write a sentence then they would dictate the next sentence to

me. It seemed to help students persist with the writing task. As instruction wore on, participants were required to do more and more of the writing themselves until they could do it independently. However, they continued to ask for my help throughout instruction.

Quality. Quality scores for stories were significantly better at post-instruction and maintenance compared to baseline performance. Rose, Dennis, and John all wrote stories in the poor range during baseline and improved to the average range at post-instruction. Dennis was the only participant not to maintain a quality scores in the average range at maintenance.

There appeared to be a correlation between the number of words written and the quality of stories. For example, Rose received a quality score of 6 for both stories she wrote that had 75 and 84 words respectively. However, she received a quality score of only 4 for her story that only contained 26 words. It is interesting to note that all three of these stories also had six or more essential elements. So, while Rose was able to get a score of 6 out of 7 on essential elements for her story of 26 words, the quality was not as good as her longer stories with as many essential elements. Looking over her stories revealed that in her shorter story, she did not develop as much action related to the goal in her shorter story as she did in her longer stories. Similarly, Dennis' highest quality score received was for his longest story written. John's stories were all of similar length and quality. Based on my observations of Rose and Dennis during testing, their motivation to write was greater on some days in comparison to others. The days they arrived more eager to write, they appeared to persist longer and write stories of greater quality. In contrast, on days they clearly did not want to be in a testing situation, they tried to get the task over

as quickly as possible. John was never eager to participate during testing and appeared to put forth a consistent amount of effort each time he was administered a testing probe.

Self- Efficacy

Question four addressed the impact of SRSD instruction on the self-efficacy of students identified as EBD who are poor writers. Participants were scored on two factors; self-efficacy for planning/writing and self-efficacy for generating/organizing ideas. All three participants had a much greater self-efficacy for planning/writing at post-test compared to their self-efficacy scores for generating/organizing ideas at pre-test. For factor one, self-efficacy for planning/writing, all three participants scored in the average to above average range (2.33 – 3.66) and made moderate gains from pre-test to post-test with scores ranging from 3.0 - 4.0.

Results for factor two, self-efficacy for generating/organizing ideas were mixed. Dennis and John scored in the low range with scores of 1.0 and 2.0 respectively at pre-test. Rose was just below average with a score of 2.33. However, she was the only participant whose self-efficacy score decreased from pre to post-test. Her post-test score was 1.0. I was surprised by Rose's decrease in efficacy based on my informal observations of her during instruction. I would have predicted an increase in her efficacy based on what she learned about planning and writing a good story. Her score could have dropped based on a more accurate perception of her ability to plan and write a story. Prior to learning the strategies she may have been overestimating her ability to write a story. After instruction, she may have recognized her weakness in the area of writing more clearly and judged herself to be not as proficient. Dennis and John both had gains of one total point from pre to post test.

Generalization

Generalization of results is a vital part of effective intervention research. In single case design research, strength of the study is not only gained through replication but also through generalization of results. In the current study generalization of the results was achieved across two factors; genre and teacher. Questions five through seven addressed the effectiveness of the SRSD intervention to improve the number of essential elements, words, and overall quality of personal narratives written by Rose, Dennis, and John. Plans were carefully made for the generalization of SRSD in story writing to another genre, personal narratives. During instruction I discussed with students how they could generalize the strategy to other types of writing. Students recorded their transfer efforts and were reinforced for their efforts. In addition, generalization was measured across teachers and settings for Rose and Dennis, as their personal narratives were administered in their classroom by their classroom teacher. Due to time constraints of the study, John's post-instruction personal narrative was administered by me at his daycare center.

While the strength of the study was weakened by the change in setting that occurred for John, the results for generalization are still meaningful. Number of essential elements, words, and overall quality were measured at baseline and one week following post-instruction. Results of the generalization probe indicated SRSD instruction in writing had a positive result on a similar genre, personal narrative. Rose, Dennis, and John all wrote personal narratives that contained more essential elements and were longer. Quality scores for all three participants improved from baseline to post-instruction as well but all three post-instruction quality scores for personal narratives were still in the

poor range when compared to other second and third grade students in the same school district.

Social Validity

The final research question addressed the social validity of the study. Rose, Dennis, and John all found the SRSD procedures to be beneficial and socially valid. Review of their overall responses indicated that they especially liked using the rockets to graph their progress and visually inspect their progress. In addition, their opinions about using self-statements were interesting. All three agreed it was difficult to remember to use the self-statements, however; they reported using them helped to reduce frustration and to persist longer. Their insights were consistent with my observations during instruction. I often had to remind all three participants when to use self-statements; when they did, their self-statements often helped them to calm down and continue writing.

Limitations

Limitations of the current study related to setting, time spent in instruction, the number of participants, maintenance and generalization. Each of these topics will be addressed in the following section.

Instructional Conditions

A significant limitation of the study was the change in setting that occurred for John. Each participant worked in an individualized setting in the library throughout the duration of the study with the exception of John. The length of sessions required to reach criterion varied for each participant. Rose reached criterion after 25 instructional sessions. Dennis met criterion after 20 sessions. John met criterion after 19 sessions. However, John changed instructional settings due to the close of the school year. His first

8 sessions were in the same setting as Rose and Dennis (the school library). His final 11 sessions as well as testing sessions took place at his daycare center. We worked in a quiet hallway at the same time of day he was instructed at school. The setting was relatively quiet and free from distractions however; on some days it was more difficult to keep John motivated. He was always very eager to return to his classroom.

The average number of sessions was in line with averages reported by Mooney, Epstein, Reid, and Nelson (2003). They reported the average intervention for students with EBD lasted a total of 12 hours over a course of 20 sessions. While each participant met criterion, I felt that had the students had more time to practice writing independently the effects may have been stronger, especially in the area of self-efficacy for generation and organization. Approximately, 8 weeks passed between the pretest questionnaire and the post test questionnaire. This may not have been enough time for participants to change perceptions about the positive effects of the intervention on their efficacy for writing.

Number of Participants

Tawney and Gast (1984) recommend a minimum of three participants for a multiple baseline across subjects design with multiple probes in baseline. However, results of the intervention could have been strengthened by a greater number of replications. Due to the time constraints of the study however it was not possible to work with more than three participants.

Additional factors played a role in the selection of participants. The first student, Joseph, was not selected based on his low IQ score and his inability to write a single sentence. While Dennis also had an IQ score lower than specified in the criteria for

selection, his writing skills were much more advanced than Joseph and he met the other criteria. In addition, after speaking with the classroom teacher about each student, we determined the instruction was beyond Joseph's frustration level. The second student not selected, Ann, was eliminated based on her unwillingness to cooperate. During the administration of a baseline probe, she cried and pleaded to "quit". Ann was new to the school and having a very difficult time adjusting to her new environment. I allowed her to "quit"; telling her it was completely her choice to work with me or not. Interestingly enough, after she witnessed both Rose and Dennis working with me, she asked if she could participate. If I had more time, I would have attempted to work with her again and feel she would have been very successful.

Generalization and Maintenance

One area cited as a weakness in the review of literature was the failure of researchers to plan for generalization. Ruhl and Berlinghoff (1992) reported 71% of the studies they reviewed failed to report generalization data. Behavior change that only occurs in training settings has modest social significance (Ruhl & Berlinghoff, 1992). While the current study included both plans and measures for generalization, it could be improved in future studies.

For example, Rose, Dennis, and John were explicitly taught how to generalize the strategies to other types of writing. The term used with participants was "transfer." I stressed with the students the importance of applying what they were learning with me to other types of writing and in other settings. They reported back their "transfer" efforts to me weekly. They said they used their strategies to help them with book reports, write in journals, write stories at home, and complete class assignments. While it is impossible to

know if the students really used the strategies to complete these writing tasks, it is evidence of their knowledge of how they could apply the strategies to other types of writing and in other places. Generalization and maintenance could have been strengthened had I the opportunity to work with students in their classrooms and explicitly modeled how to apply the strategies to other writing tasks. Additionally, results of the generalization probe (personal narrative) could have been strengthened had I discussed how a personal narrative is similar to a story during instruction.

Implications for Teaching

The results of the current study indicate promise for academic interventions for students with EBD; however it should also be noted that while the participants in the current study demonstrated success with using SRSD to write stories that were longer, contained more essential elements, and were of overall better quality; these results were achieved through intense individual instruction. Classroom teachers who attempt to implement this intervention may experience challenges not experienced during the current study due to classroom restraints. For example, classroom teachers may not be able to deliver the instruction individually. Future studies need to look at the effects of using SRSD in writing with groups of students.

Similarly, teachers who implement SRSD in their classroom will be faced with the challenge of working on the academic task of writing while simultaneously handling multiple students' behavior problems. In the current study, the participants were often not motivated to work and were in constant struggle with their emotions. Each participant perceived him or herself as a poor student and someone who was difficult to work with. Their behaviors demanded a great deal of patience on my part; however I was only

working with one student at a time and was determined to see each of the participants succeed in writing.

In chapter one, I described the negative teacher/student interactions that occur in self-contained EBD classrooms and how they can often interfere with instruction. In addition, I described the belief many teachers have that student behavior must be under control before instruction can take place. Based on my experience in this study, I have a better understanding of why many teachers struggle with implementing high quality instruction with students with EBD. Children with EBD are perhaps the most demanding and challenging group of students to teach. It requires a great deal of patience and persistence. I had the luxury of working with each of these students individually, several times a week, for thirty minutes at a time. Classroom teachers have much greater demands placed on them in conjunction with working with this challenging population. Future studies will need to examine how using such an intervention would work with larger groups of students and in different settings. For example, how could a special education teacher implement this intervention in his or her self-contained classroom? Similarly, could regular education teachers be trained to implement this type of intervention in an inclusive setting?

An additional problem experienced by all three participants in the current study was their aversion to writing. While their pre-test self-efficacy scores on factor one, self-efficacy for planning/writing indicated high self-efficacy in this area, this did not always match my observations. For example, during baseline and early in instruction, all three participants were critical of their writing and hesitant to write on their own. Some days they were more excited and motivated to write than others. I found that during

instruction, especially collaboration, the participants had many creative and good ideas for writing. They were somewhat like “mini-instructors,” telling me how to write the story and would elaborate at length on how to improve our collaborative stories. In contrast, when I began to wean each of them from the collaboration stage, they were each very hesitant and unsure of themselves. They were much more critical of their independent stories. They would include all the essential elements but the details were not as elaborate and they wrote fewer words. I think if I had removed the physical act of writing for each of them and allowed them to always dictate their stories to me, they would have written stories that were even longer and of higher quality at post-test. When writing independently, they appeared to write as little as possible while still getting all 7 parts into their stories.

One final concern for classroom teachers relates to generalization. In the current study a great deal of time was spent discussing how to use the story writing strategy with other types of writing and in different settings. However, I was not able to explicitly work with students on other types of writing or in different settings. I would hypothesize that the effects of the intervention would be much greater when implemented by students’ classroom teachers. Classroom teachers would have the benefit of knowing students’ academic and behavioral characteristics and personalizing the intervention to meet individual needs more accurately and quickly than an outside instructor. Classroom teachers could explicitly and more frequently point out opportunities to use the writing strategies for other types of writing besides story writing. They could model for students how to generalize the strategies explicitly to other writing tasks.

Implications for Research

The results of this study provide a basis to continue the implementation of SRSD strategies instruction in writing with students identified as EBD. SRSD instruction should be examined in the classroom as well as with larger groups of students. Students' performance in other genres of writing beyond story writing and personal narratives should be examined as well.

In addition to examining the effects of using SRSD with students identified as EBD in additional settings and genres; future researchers should examine the effects of the individual components of SRSD in relation to students with EBD. Previous studies have examined the relative effectiveness of SRSD components with LD students (Graham & Harris, 1989; Sawyer et al., 1992). However, in this study the use of scaffolding instruction appeared to have a strong influence on participants' motivation to write. Based on my observations, it appeared students were more motivated to write when receiving greater support. As instructional support was removed, motivation to write appeared to decrease. Future studies may help to explain the impact of motivation on students' desire to write as well as their output.

It was also noted in the current study that participants produced stories of greater quality during instruction when the act of writing was shared with the instructor. For all three participants, much greater detail was provided in their stories when they were able to dictate their stories to me. Previous research with poor writers has indicated that allowing students to dictate rather than write, results in significant output (De La Paz & Graham, 1995). For example, MacArthur and Graham (1987) examined the effects of allowing fifth and sixth grade students with LD to dictate stories rather than write or type.

The length of stories tripled for students who dictated. Informal observation of stories participants wrote in the current study during the collaborative phase versus stories written independently during post instruction showed similar differences. Future researchers could examine if students with EBD would have similar results under the same conditions.

Finally, students with EBD are a heterogeneous population who experience a variety of emotional and behavioral problems. The participants in the current study represented a small sample of the EBD population. The participants were selected based on their shared academic needs. They shared some similar behavioral characteristics but were not selected to participate based on these similarities. Future studies should include more participants and examine students with EBD who share similar behavioral characteristics. For example, researchers could examine students who are characterized as having externalizing behaviors (aggression, disruption, defiance, impulsivity, hyperactivity) or internalizing behaviors (social withdrawal, depression, anxiety, and obsessive-compulsive behaviors).

Conclusions

According to Mooney et al. (2003), research in the area of writing for students with EBD is virtually nonexistent. While the academic problems experienced by students with EBD are quite serious, empirically based academic interventions studies are absent from the literature. The current study sought to target the academic problems experienced by students with EBD in the area of writing using Harris and Graham's Self-Regulated Strategy Development (SRSD) model.

This was the first time the effects of SRSD in writing with students identified as EBD was examined. The SRSD intervention in story writing sought to address the cognitive, behavioral, and affective needs of students with EBD. Within the SRSD framework, the goals and significance of story writing and self-regulation strategies were discussed with the students. The strategies were explicitly and collaboratively modeled within the context of writing. As the students learned to apply the strategy, collaboration, scaffolding, and feedback were provided. These supports were removed as participants were able to apply and manage the writing and self-regulation strategies needed to compose independently. Further, participants were explicitly taught how to generalize the strategy to other types of writing. Instruction was criterion based rather than time-based.

In Chapter one, several reasons were proposed to explain the lack of attention given to the academic deficits experienced by students with EBD. It was proposed that using SRSD with EBD students would address each of these issues. First, it addressed the negative teacher/student interactions that often occur in self-contained EBD classrooms and interfere with academic instruction. In the current study, a collaborative process was emphasized between the teacher and students. Instruction was scaffolded and as Rose, Dennis, and John became more confident and proficient in using the strategies, they became more independent. Further, a positive working environment was established in which the students were not afraid to take risks or make mistakes. They learned to use self-statements to cope with feelings of frustration and also to praise themselves for a job well done.

Secondly, I did not assume the students' behaviors must be under control before beginning instruction. Rose, Dennis, and John worked on their behavior throughout

instruction by utilizing the self-regulation strategies while simultaneously working on becoming better writers. Based on my observations, their behaviors did not disappear during instruction; however they were able to persist at writing longer by managing their behaviors throughout instruction.

Finally, the current intervention addressed the need for effective academic interventions for EBD students. Rose, Dennis, and John all wrote stories that were longer, contained more essential elements, and were of overall better quality at post-instruction and maintenance compared to their baseline stories. In addition, they generalized these effects to an additional genre, personal narratives, by writing personal narratives that were longer, contained more essential elements, and were of overall better quality at post-instruction compared to personal narratives written during baseline. Self efficacy on both factors improved with the exception of Rose. All three participants found the strategies to be useful and valued their impact on their writing.

APPENDIX A

POW + WWW with Transfer Lesson 1 ~ Day 1

Instructor: _____

Student(s): _____

Date: _____

Purpose: Develop Background Knowledge, Discuss It

Objectives: Introduction to POW, story parts, and story parts reminder. Identification of story parts in story examples.

Materials needed: Mnemonic charts and story examples (Albert the fish), WWW graphic organizer, paper, pencils, scratch paper, student folders

I. Introduce Yourself

Introduce yourself as a student from the University of Maryland who is trained to provide writing instruction. Tell students you're going to teach them some of the "tricks" for writing. First, we're going to learn a strategy, or trick, that good writers use **for everything** they write. Then we are going to learn the trick, or strategy, for writing good stories.

II. Introduce POW

- A. Put out the POW + WWW chart so that only POW shows.
- B. Emphasize: POW is a trick good writers often use, for many things they write.**
- C. Go over parts of POW, discussing each. (P = Pick my idea; O = Organize my notes; W = Write and say more). Describe and discuss the concept of notes. Use examples; "Your teacher uses notes when she creates a web on the board; Your parents use notes when they write things on a calendar or a grocery list." Have students generate some examples on their own. Emphasize that a good way to remember POW is to remember that it **gives them POWER for everything they write.**
- D. Practice POW; Turn the chart over. Practice reviewing what each letter in POW stands for and why it is important (good writers use it often, for many things they write). Help as needed. Have students write out POW on scratch paper. Repeat until each student knows what POW stands for and why it is important.

III. Discuss Good Stories

Discuss good stories briefly – ask students what makes a story good? Be sure to include:

- A. Good stories are **fun for me to write and fun for others to read.**
- B. Good stories **make sense and have several parts** – we will learn a trick for remembering the parts of a good story.

____ IV. Introduce WWW

Introduce WWW – uncover more of the chart so that the WWW shows. “Let’s find out what the parts of a good story are.” Have students view the chart. Briefly discuss each W. Use the word “character” for **Who**; for **When**, ask students to tell you “how does a person tell you when in a story?” –Once upon a time....A long time ago.....Yesterday.....Wednesday afternoon at 4:00.....One night.....and so on. Have students generate examples. Next go over **Where**. Give examples such as Baltimore, at school, in Africa...have students give examples.

____ V. Find WWW in a story (Albert)

- A. Say, “Now we are going to read a story to find out if the writer used **WWW** in the story.” (Leave out the partially covered story parts reminder sheet where students can see it.) Quickly review what the WWW stands for.
- B. Give each student a copy of the story (Albert). Ask students to read along silently while you read the story out loud. Tell them to be listening for the who, when, and where in the story. Read the story a second time and ask students to raise their hands if they hear a story part. Remind them that they might not hear the parts in that order. As the students identify the parts, who, when, and where; write each part on the appropriate space on the graphic organizer. **Do not use complete sentences – do this in note form!** Be sure that students know you are writing in note form. Be explicit.

____ VI. Introduce What = 2

- A. Uncover each What=2. Explain briefly and discuss each what. Give examples of how a writer might tell each. (Use a story most students would know ~ 3 little pigs ~ what did the wolf want? What happens in the story?)

____ VII. Introduce How = 2

- A. Uncover How=2. Explain briefly and discuss each how. Give examples of how a writer might tell each. (How does the story of the 3 little pigs end? How do the characters feel throughout the story ~ when the wolf knocks at the door?)

____ VII. Find What=2 and How=2 in a story (Albert)

- A. Tell students that they are now looking for 2 whats and 2 hows. Briefly review what each means and reread the story. Stop as students raise their hands to name the parts. Write each part in note form on the graphic organizer. Point out that we might put more than one note in each part. A good story may have more than 2 whats. Also, good writers tell how the characters feel in different parts of the story. If students have not identified all the parts, go back over the story and help as needed. Be encouraging and positive throughout.

____ IX. Practice Story Parts Reminder

Turn over the WWW chart and students’ papers. Have students practice telling you the 7 parts to a good story. Have each student write the reminder, WWW What=2 How=2 on scratch paper. Repeat several times till students get comfortable.

___ XI. Lesson Wrap Up

- A.** Announce test! (No grade) next session. They will come and write out POW and the story parts reminder and tell what they mean from memory.
- B.** Give each student their own folder and a copy of the story parts reminder chart. Have them put today's work and their charts in their folder and give the folder back to you ~ explain you will bring the folder to every class.

POW + WWW with Transfer
Lesson # 1 – Day 2

Instructor: _____

Date: _____

Student(s): _____

Purpose: Develop Background Knowledge, Discuss It

Objectives: Review and practice POW, story parts, and story part reminder; identification of story parts in story examples; **establish partners and concept of transfer

Materials Needed: Mnemonic charts and story example (The Lion and the Mouse), WWW graphic organizers, “I transferred my strategies” chart, paper, pencils, scratch paper, student folder

I. Test POW and WWW, What = 2, How =2

Test to see if the student remembers **POW** and the **story parts reminder**.

A. Give the student a piece of scratch paper. Ask the student to **write down POW** – then ask student what it stands for, and why it is important for writing stories. If student has trouble remembering POW, practice it using rapid fire with the cue cards.

Rapid Fire Practice

Give the student a set of cue cards (for WWW, start practice with cue cards with picture cues then wean the students to cards without picture cues). Say, “To help you remember the parts, we are going to do an exercise called rapid fire. We will take turns saying the parts. This is called rapid fire because you are trying to name the parts as rapidly as you can. If you need to look at the cue card, you may; however, don’t rely on the card too much because I am going to put the card away after several rounds of rapid fire.” Allow the student to paraphrase but be sure intended meaning is maintained. Do with cue cards and without. If response is correct, make brief positive comment. If incorrect, prompt by pointing to cue card.

B. Ask the student to **write out the story parts reminder** on the scratch paper. Each should write: W-W-W; What = 2; How = 2. If the student has trouble, be supportive and prompt as needed.

C. Now **ask the student what each part of the story part reminder stands for**.

D. It is essential that the student memorize the reminder. If the student is having trouble with this, spend a few minutes practicing it using rapid fire with the cue cards.

E. Tell the student you will test him/her on it each day to make sure he/she has it. Remind the student that he/she can practice memorizing it.

____ II. Find Parts in a Second Story (The Lion and the Mouse).

Leave out chart. As before, remind the student to raise his/her hand when they hear a part. Be sure each part is identified. As the student identifies who, when, and where; you write each in the appropriate space on the graphic organizer: **do not use full sentences – do this in note form.** Be sure that the student understands that you are writing in **note form!**

____ III. Introduce Transfer

Tell the student: **“We have a goal for our POW and WWW strategies.”**

A. ******The first goal, Goal 1 for the next time: use all or parts of POW and/or WWW in other writing tasks. Brainstorm together some classes or other writing tasks he/she could use both POW and WWW for, being sure to note that we should use POW with WWW whenever we use WWW. Other ideas could be: book reports, letters to friends, reports on special topics, writing for a school newsletter, writing about something that happened to you or a special event, and so on. Briefly note that for some tasks, like writing a report, all parts of the WWW trick might not be right to use – so what could we do? (Change WWW to fit the kind of report we need to write; don’t use all of WWW if it doesn’t make sense; WWW is in many reports).

B. ******Tell him/her to report back to you on using all or any parts of POW/WWW next time (for example, the student might report making notes for a writing task before he/she wrote, this would count). Show him/her the “I transferred my strategies” chart and explain that **once a week** you will write down and put a star next to each time he/she tells you about using all or any part of POW/WWW outside of this class. Briefly discuss the word **“transfer”** – transfer means to move (like I transferred schools means that I moved from one school to another). Emphasize that you want him/her to **transfer** what they learn about POW and WWW from this class to other classes and other writing tasks.

____ IV. Lesson Wrap Up

A. Announce test! (no grade!) next session. He/she will come and write out POW and the story parts reminder and tell what they mean from memory. Have the student take his/her scratch paper with POW and the story parts reminder on it with him/her.

B. ******Remind the student to transfer the strategy, that you will ask him/her next time if he/she transferred, and that you will be recording on their chart later in the week.

C. Give the student his/her folder, a copy of the story parts reminder chart, and a ****copy** of the “I transferred my strategies” chart. **Have them put today’s work and his/her chart in his /her folder and give the folder back to you – explain that you will bring the folder to every class.**

Albert The Fish

On a warm, sunny day two years ago, there was a big gray fish named Albert. He lived in a big icy pond near the edge of town. Albert was swimming around the pond when he spotted a big juicy worm on top of the water. Albert knew how good worms tasted and wanted to eat this one for dinner. So he swam very close to the worm and bit into him. Suddenly, Albert was pulled through the water into a boat. He had been caught by a fisherman. Albert felt sad and wished he had been more careful.

Albert The Fish

On a warm, sunny day two years ago (**When**), there was a big gray fish named Albert (**Who**). He lived in a big icy pond near the edge of town (**Where**). Albert was swimming around the pond when he spotted a big juicy worm on top of the water. Albert knew how good worms tasted and wanted to eat this one for dinner (**What He Wanted To Do**). So he swam very close to the worm and bit into him. Suddenly, Albert was pulled through the water into a boat (**What Happened**). He had been caught by a fisherman (**Ending**). Albert felt sad (**Feelings**) and wished he had been more careful.

The Lion and the Mouse

One sunny day a long time ago a big strong lion was taking a walk in the forest near his home. He walked into a big net. "Help!" he yelled. "I can't get out. I am scared." A fat little mouse came running along. She cried, "I'll help you!" "Oh!" said the lion. "How could you help? You're too little." The mouse said, "I can too help! You'll see." And the mouse began biting the net into small bits. The lion was able to get out of the net. When the lion got out he smiled. He said, "You may be a little mouse. But you're a big help." The mouse felt proud that she had helped the lion.

The Lion and the Mouse

One sunny day a long time ago (**When**) a big strong lion (**Who**) was taking a walk in the forest near his home (**Where**). He walked into a big net. “Help!” he yelled. “I can’t get out. I am scared (**Feelings**).” A fat little mouse (**Who**) came running along. She cried, “I’ll help you!” (**What He Wanted to Do**) “Oh!” said the lion. “How could you help? You’re too little.” The mouse said, “I can too help! You’ll see.” And the mouse began biting the net into small bits (**What Happened**). The lion was able to get out of the net (**Ending**). When the lion got out he smiled. He said, “You may be a little mouse. But you’re a big help.” The mouse felt proud (**Feelings**) that she had helped the lion.

POW + WWW with Transfer
Lesson 2

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW + Story Parts Reminder; Model; Record Self-Instructions

Objectives: Review POW and story parts reminder; model self-instructions; have student establish personal self-instructions

Materials Needed: Mnemonic Chart, practice cards, WWW graphic organizer, paper, pencils, lined paper, student folder, story (*Farmer's Story*), practice picture (*turtle*), self-instruction sheets, and one blank graph.

_____ **I. Test POW and WWW, What = 2, How =2**

Test to see if the student remembers **POW** and the **story parts reminder** by writing the mnemonic out on a piece of scratch paper. Spend some time practicing the parts out loud. Use the rapid fire cards to play a game. Tell the student you will test them on it each day to make sure he/she has it.

_____ **II. Find Parts in a Story**

Practice finding parts of a story (*Farmer's Story*) and taking notes on the graphic organizer. Point out to the student how and why you are taking notes. Give the student opportunities to orally state the parts in note form.

_____ **III. Model Using Self-Statements for "P" in POW**

Have a copy of your self-statement sheet available. Use problem definition, planning, self-evaluation, self-reinforcement, coping statements as you work. Use statements that are similar to those employed by the students. Ask the student to help you with ideas, but be sure you are in charge of the process. Say:

"Remember that the first letter in POW is P – pick my idea, Today we are going to practice how to think of a good story idea and come up with good story parts. To do this we have to let our minds be free and creative."

- A. Look at the practice picture: turtle. Model things you might say to yourself when you want to think of a good idea. For example, "Take my time and a good idea will come to me." What ideas can I see in this picture." You can also start with a negative statement and model how a coping statement can help you get back on track. For example, "I can't think of anything to write! Ok, if I just take my time, a good idea will come to me." Explain to the student that things you say to yourself out loud and in your head, help you get through the writing process. I

might think in my head, what is it I have to do? I have to write a good story. A good story makes sense and has all 7 parts.

- B.** Ask the student to come up with things he/she might say in his/her head to help him/her think of good story ideas and good parts. If the student is having trouble, help him/her create a statement or let him/her “borrow” one of yours until he/she come up with his/her own.

____ **IV. Discuss Using “O” in POW**

Tell the student the second letter in POW is O –ORGANIZE my notes. Explain that you are going to write a story today with his/her help. Put out your graphic organizer and your story reminder sheet. Briefly review the 7 parts to a good story and point out their places on the graphic organizer. Review what your goals should be – Write a good story, with all 7 parts, that makes sense, is fun to read, and fun to write.

Now I can do O in POW – Organize my Notes. I can write down story part ideas for each part. I can write ideas down in different parts of this page as I think of ideas (be sure to **model moving out of order during your planning**). **What ideas do I see in this picture?** (Now – talk out and fill in notes for **who, when where**). For “who” I see...For “when” I can write...Let’s see, for “where” – it’s ...Good! I like these parts! Now I better figure out the **2 whats and 2 hows**. **Let my mind be free, think of new, fun ideas.** (Now talk out and briefly write notes for the 2 whats and 2 hows – not in full sentences - **use coping statements at least twice**.) Let’s see, for the story question of “what does the main character want to do “I think...For the next “what” question, “what happens when she tries to do it” I think...**I can add more action** by writing about...For the “ending” I can say...For the “feeling” story part I can write about...(After generating notes for all the story parts say – Now I can **look back at my notes and see if I can add more notes for my story parts – actually do this** – model it – use coping statements). I can also **look for ideas for good word choice or million dollar words – do this**.

Add to student’s self-statement lists. As the student if he/she can remember: 1)the things you said to yourself to get started? 2)things you said while you worked (try to get some creativity statements, coping statements, statements about remembering the parts, and self-evaluation statements) 3) things you said to yourself when you finished. For example, “Did I get all 7 parts.” (Tell them if they can’t remember and discuss each as you go). Make sure the students adds these to their list:

____ **V. Model Writing a Story Using POW and WWW.**

- A.** Keep the POW and story parts graphic out; also the student’s self statement sheets
- B.** Model the entire process: writing an actual story as you go (using the practice picture and your graphic organizer). (Please print so students can easily follow)

Now I can do W in POW – write and say more. I can **write my story and think of more ideas or million dollar words as I write**. Now – talk yourself through writing the

story; the students can help. Use a clean piece of paper and print. **Start by saying “How shall I start? I need to tell who, when, and where.”** Then pause and think, then write out sentences. Do be sure to **add 1-2 more ideas and million dollar words** on your plan as you write. Don’t hurry, but don’t slow it down unnaturally. Also, at least 2 times, **ask yourself, “Am I using good parts and, am I using all my parts so far?”** Use **coping statement**. Also ask yourself, “Does my story make sense?” When story is done, say **“Good work, I’m done. It’ll be fun to share my story with others.”**

____ VI. Self-Statements for Story Writing

Add to student’s self-statements lists. Ask the students if they can remember: 1)the things you said to yourself to get started? 2)things you said while you worked (try to get some creativity statements, coping statements, statements about remembering the parts, and self-evaluation statements) 3)things you said to yourself when you finished. (Tell him/her if he/she can’t remember and discuss each as you go). Make sure each student adds these to his/her list:

- what to say to **get started**. This must be along same lines as **“What is it I have to do? I have to write a good story with good parts, and with all 7 parts.”** – but in student’s own words.
- 1-2 things to say **while you work**: self-evaluation, coping, self reinforcement, and any others he/she likes (in student’s own words).
- Note that we don’t always have to think these things out loud; once we learn them we can think in our heads or whisper to ourselves.

____ VII. Graph the Story

Ask students – does this story have all 7 parts – then fill in graph.

____ VIII. Lesson wrap-up

- A. Keep your story and graph.
- B. Remind of POW and story parts reminder **test** again next time.
- C. ** Remind him/her to transfer the strategy, that you will ask them next time if they transferred, and the he/she will fill in the transfer chart again at the end of the week.

The Farmer's Story

Many years ago there was an old farmer who lived near the woods. He owned a donkey. The farmer wanted to put his donkey in the barn. First he pushed him, but the donkey would not move. Next, the farmer tried to frighten the donkey into the barn. So he asked his dog to bark at the donkey, but the lazy dog refused. Then the farmer thought that his cat could get the dog to bark. So he asked the cat to scratch the dog. The dog began to bark. The barking frightened the donkey and he jumped into the barn. The farmer was very proud of himself.

The Farmer's Story

Many years ago (**When**) there was an old farmer (**Who**) who lived near the woods (**Where**). He owned a donkey. The farmer wanted to put his donkey in the barn (**What He Wanted To Do**). First he pushed him, but the donkey would not move. Next, the farmer tried to frighten the donkey into the barn. So he asked his dog to bark at the donkey, but the lazy dog refused. Then the farmer thought that his cat could get the dog to bark. So he asked the cat to scratch the dog. The dog began to bark (**What Happened**). The barking frightened the donkey (**Feelings**) and he jumped into the barn (**Ending**). The farmer was very proud of himself (**Feelings**).

POW + WWW with Transfer
Lesson #3

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & Story Parts Reminder, Self-Instructions, Collaborative Writing

Lesson Overview

The student and teacher will collaboratively write a story using **POW + WWW, What=2, How=2**. The teacher will need to provide the support needed to insure that all students are successful in writing a story that has all 7 parts. The teacher should reinforce the students' use of self-instructions, good word choice, a story that makes sense, and "million dollar" words.

Objectives: Review and practice POW, story parts, and story part reminder; identification of story parts in story examples; **reinforce transfer and write collaboratively

Materials Needed: Mnemonic charts and story example (Smokey), WWW graphic organizers, Transfer Sheet, Self-Instructions Sheet, Rocket Graphing Sheet, story prompt (boy on alligator), paper, pencils, scratch paper, and student folder.

____ **I. Test POW and WWW, What = 2, How =2**

Test to see if the student remembers **POW** and the **story parts reminder**.

A. Test to see if the student remembers **POW + WWW, What=2, How=2**. Do it out loud to save time. It is essential that the student memorize these. If student has trouble remembering POW, practice it using rapid fire with the cue cards. Tell the students you will test them on it each day to make sure they have it.

____ **III. Transfer**

Review the meaning of transfer briefly. Ask the student to orally report back **one time** he used or could have used all or parts of POW and/or WWW in other classes or for other kinds of writing tasks. If necessary, brainstorm together again some classes or other writing tasks they could use both POW and WWW for, being sure to note that we should use POW with WWW whenever we use WWW. Other writing tasks could be: book reports, letters to friends, reports on special topics, writing for a school newsletter, writing about something that happened to you or a special event, and so on. Briefly remind the student that for some tasks, liking writing a report, all parts of the WWW trick might not be right to use – so what could we do? (Change WWW to fit the kind of report we need to write). If it is the last day of the week you fill in the Transfer sheet and put a star next to each thing recorded.

____ **IV. Collaborative Writing**

Give students a blank graphic organizer and ask them to take out their self-statements list. Put out the boy on the alligator practice picture. This time let the students lead as much as possible, but prompt and help as much as needed. It should be a collaborative process.

1. Say, “Remember that the first letter in **POW** is **P** - PICK my IDEA.” Refer student to his self-statements for creativity or thinking free. Help the student get an idea.
2. Say, “The second letter in **POW** is **O** - ORGANIZE my NOTES. Remind the student to use the story parts reminder to help. Encourage them to say, “I will use this page to make my notes and organize my notes.” Review – “What should our goal be?” “We want to write a good story - a good story has all seven parts, makes sense, is fun for me to write and for others to read.” After you have both generated notes for all the story parts (have student write as much as possible), say – “Remember to look back at our notes and see if we can add more detail or description” - help them actually do this. Make sure all the parts are filled in on the notes sheet. Identify at least 2 things the student did really well.
3. The last letter in **POW** is **W** - WRITE and SAY MORE. Encourage and remind the student to start by saying “What is it I have to do here? I have to write a good story - a good story has all 7 parts and makes sense. I can write my story and think of more good ideas or million dollar words as I write.” Help students as much as they need to do this, but try to let them do as much as they can alone. Encourage them to use other self-statements of their choice while they write. If students do not finish writing today, they can continue at the next lesson.

____ **V. Introduce Graphing Sheet/Graph Story Parts**

Introduce Rocket Graphing Sheet. Have the student shade in the graph to equal the number of story parts they included – have the student determine- does his story have all 7 parts - then fill in graph. Reinforce the student for reaching 7. Tell the student, “You blasted your rocket!”

____ **VI. Lesson Wrap-Up**

- A. Have the student put his work and charts in his folder.
- B. Remind the students that they will fill in the transfer chart again next time.
- C. Remind students of the POW + WWW, What=2, How=2 test again next time.

Smokey

Smokey was an old gray horse. Lisa used to ride Smokey, but now Smokey stays in his field on the farm. He was happy. One hot summer day Lisa came to see Smokey. She brought him red apples. Smokey liked the red apples. Lisa liked to run through the meadow and fields. Lisa thought Smokey would like to run so she opened the gate. But Smokey didn't go out because he didn't want to run. Lisa said, "You don't have to run with me. You stay here and I will give you an apple everyday." And she gave him an apple everyday from that day on. Both Lisa and Smokey were happy.

Smokey

Smokey was an old gray horse (**Who**). Lisa (**Who**) used to ride Smokey, but now Smokey stays in his field on the farm (**Where**). He was happy (**Feeling**). One hot summer day (**When**) Lisa came to see Smokey. She brought him red apples. Smokey liked the red apples. Lisa liked to run through the meadow and fields. Lisa thought Smokey would like to run so she opened the gate (**What she wanted to do**). But Smokey didn't go out because he didn't want to run (**What happened next**). Lisa said, "You don't have to run with me. You stay here and I will give you an apple everyday." And she gave him an apple everyday from that day on (**Ending**). Both Lisa and Smokey were happy (**Feeling**).

POW + WWW with Transfer
Lesson #4

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & Story Parts Reminder, Compare Prior Performance to Current Writing Behavior

Objectives: Review and practice POW, story parts, and story part reminder; reinforce transfer, discuss pretest story and compare to current writing

Materials Needed: Mnemonic charts, WWW graphic organizers, Transfer Sheet, Self-Instructions Sheet, Rocket Graphing Sheet, pretest story, collaborative story, pencil, scratch paper and student folder.

_____ **I. Test POW and WWW, What = 2, How =2**

Test to see if the student remembers **POW** and the **story parts reminder**.

A. Test to see if the student remembers **POW + WWW, What=2, How=2**. Do it out loud to save time. It is essential that the student memorize these. If student has trouble remembering POW, practice it using rapid fire with the cue cards. Tell the students you will test them on it each day to make sure they have it.

_____ **II. Transfer**

Review the meaning of transfer briefly. Ask the student to orally report back **one time** he used or could have used all or parts of POW and/or WWW in other classes or for other kinds of writing tasks. If necessary, brainstorm together again some classes or other writing tasks they could use both POW and WWW for, being sure to note that we should use POW with WWW whenever we use WWW. Other writing tasks could be: book reports, letters to friends, reports on special topics, writing for a school newsletter, writing about something that happened to you or a special event, and so on. Briefly remind the student that for some tasks, liking writing a report, all parts of the WWW trick might not be right to use – so what could we do? (Change WWW to fit the kind of report we need to write). If it is the last day of the week you fill in the Transfer sheet and put a star next to each thing recorded.

_____ **III. Establish Prior Performance**

Say, “Remember the story you wrote for me before we learned POW and WWW?” Pull out a story the student wrote during pretesting/baseline.

Have the student read his story and identify which parts he has. (You need to have worked out ahead of time what parts the student had and which ones the student didn't have.)

Briefly note with the students which parts he has and which he doesn't. Graph his results on the rocket sheet next to the collaborative story (which had all 7 parts). Emphasize with the student that he wrote this story before learning the "tricks" for writing. Now that he knows the "tricks" his writing has already greatly improved. Compare the pretest story to the collaborative story and talk about the student has learned about good writing. If the student is exhibiting frustration or is upset about his pretest story, encourage him to use a self-statement.

Spend some time talking about how to improve the pretest story and if the student would like, give him the opportunity to redo the story now that he knows the "tricks" for writing a good story. Help the students make a commitment to use the strategies (tricks) to write better stories.

Set a goal to continue writing better stories. Remind them that good stories: are fun to write and for others to read, have all 7 parts, that each part is well done, and that good stories make sense.

Say, "Our goal is to have all of the parts and 'better' parts the next time we write a story."

___ IV. Lesson Wrap-Up

- C. Have the student put his work and charts in his folder.
- D. Remind the students that they will fill in the transfer chart again next time.
- C. Remind students of the POW + WWW, What=2, How=2 test again next time.

POW + WWW with Transfer

Lesson #5

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & Story Parts Reminder, Collaborative Practice; Review Self-Instructions

Objectives: Review and practice POW, story parts, and story part reminder; reinforce transfer, individual collaborative practice

Materials Needed: Mnemonic charts, WWW graphic organizers, Transfer Sheet, Self-Instructions Sheet, Rocket Graphing Sheet, story picture prompt (flying boy), pencil, scratch paper and student folder.

____ **I. Test POW and WWW, What = 2, How =2**

Test to see if the student remembers **POW** and the **story parts reminder**.

A. Test to see if the student remembers **POW + WWW, What=2, How=2**. Do it out loud to save time. It is essential that the student memorize these. If student has trouble remembering POW, practice it using rapid fire with the cue cards. Tell the students you will test them on it each day to make sure they have it.

____ **II. Transfer**

Review the meaning of transfer briefly. Ask the student to orally report back **one time** he used or could have used all or parts of POW and/or WWW in other classes or for other kinds of writing tasks. If necessary, brainstorm together again some classes or other writing tasks they could use both POW and WWW for, being sure to note that we should use POW with WWW whenever we use WWW. Other writing tasks could be: book reports, letters to friends, reports on special topics, writing for a school newsletter, writing about something that happened to you or a special event, and so on. Briefly remind the student that for some tasks, liking writing a report, all parts of the WWW trick might not be right to use – so what could we do? (Change WWW to fit the kind of report we need to write). If it is the last day of the week you fill in the Transfer sheet and put a star next to each thing recorded.

____ **III. Individual Collaborative Writing**

Give students a blank graphic organizer and ask them to take out their self-statements list. Put out the picture prompt (flying boy). This time let the students lead as much as possible, but prompt and help as much as needed.

1. Say, “Remember that the first letter in **POW** is **P** - PICK my IDEA.” Refer student to his self-statements for creativity or thinking free. Help the student get an idea.

2. Say, “The second letter in **POW** is **O** - ORGANIZE my NOTES. Remind the student to use the story parts reminder to help. Encourage them to say, “I will use this page to make my notes and organize my notes.” Review – “What should your goal be?” “You want to write a good story - a good story has all seven parts, makes sense, is fun for you to write and for others to read.” After the student has generated notes for all the story parts, say – “Remember to look back at your notes and see if you can add more detail or description” - help them actually do this. Make sure all the parts are filled in on the notes sheet. Identify at least 2 things the student did really well.

3. The last letter in **POW** is **W** - WRITE and SAY MORE. Encourage and remind the student to start by saying “What is it I have to do here? I have to write a good story - a good story has all 7 parts and makes sense. I can write my story and think of more good ideas or million dollar words as I write.” Help students as much as they need to do this, but try to let them do as much as they can alone. Encourage them to use other self-statements of their choice while they write. If students do not finish writing today, they can continue at the next lesson.

V. Graph Story Parts

Have the student shade in the graph to equal the number of story parts they included – have the student determine- does his story have all 7 parts - then fill in graph. If the student misses a part, talk about how to revise the story and set a goal for next time.

IV. Lesson Wrap-Up

- E. Have the student put his work and charts in his folder.
- F. Remind the students that they will fill in the transfer chart again next time.
- G. Remind students of the POW + WWW, What=2, How=2 test again next time.

***Repeat this lesson if the student appears to have difficulty with any of the story parts, with taking notes on the graphic organizer, or is having difficulty transferring notes to the actual story writing.

POW + WWW with Transfer

Lesson #6

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & Story Parts Reminder, Wean off Graphic Organizer

Objectives: Review and practice POW, story parts, and story part reminder; reinforce transfer, individual collaborative practice; wean of graphic organizer

Materials Needed: Mnemonic charts, WWW graphic organizers, Transfer Sheet, Self-Instructions Sheet, Rocket Graphing Sheet, story picture prompt (alien), pencil, scratch paper and student folder.

____ I. Test POW and WWW, What = 2, How =2

Test to see if the student remembers **POW** and the **story parts reminder**.

A. Test to see if the student remembers **POW + WWW, What=2, How=2**. Do it out loud to save time. It is essential that the student memorize these. If student has trouble remembering POW, practice it using rapid fire with the cue cards. Tell the students you will test them on it each day to make sure they have it.

____ II. Transfer

Review the meaning of transfer briefly. Ask the student to orally report back **one time** he used or could have used all or parts of POW and/or WWW in other classes or for other kinds of writing tasks. If necessary, brainstorm together again some classes or other writing tasks they could use both POW and WWW for, being sure to note that we should use POW with WWW whenever we use WWW. Other writing tasks could be: book reports, letters to friends, reports on special topics, writing for a school newsletter, writing about something that happened to you or a special event, and so on. Briefly remind the student that for some tasks, liking writing a report, all parts of the WWW trick might not be right to use – so what could we do? (Change WWW to fit the kind of report we need to write). If it is the last day of the week you fill in the Transfer sheet and put a star next to each thing recorded.

____ III. Wean off Graphic Organizer

Explain to the student that they won't usually have a story parts reminder page with them when they have to write stories, so they can make their own notes on blank paper. Show them how to write down the reminder at the top of the page: POW, WWW What =2 How =2 . Have them make a space for each story part on their notes page.

____ **IV. Individual Collaborative Writing**

Give students a blank graphic organizer and ask them to take out their self-statements list. Put out the picture prompt (aliens). This time let the students lead as much as possible, but prompt and help as much as needed. This time the student will make notes on his paper ~ no graphic organizer! Go through the following processes but let the student do as much as possible with prompting.

1. Say, “Remember that the first letter in **POW** is **P** - PICK my IDEA.” Refer student to his self-statements for creativity or thinking free. Help the student get an idea.

2. Say, “The second letter in **POW** is **O** - ORGANIZE my NOTES. Remind the student to use the story parts reminder to help. Encourage them to say, “I will use this page to make my notes and organize my notes.” Review – “What should your goal be?” “You want to write a good story - a good story has all seven parts, makes sense, is fun for you to write and for others to read.” After the student has generated notes for all the story parts, say – “Remember to look back at your notes and see if you can add more detail or description” - help them actually do this. Make sure all the parts are filled in on the notes sheet. Identify at least 2 things the student did really well.

3. The last letter in **POW** is **W** - WRITE and SAY MORE. Encourage and remind the student to start by saying “What is it I have to do here? I have to write a good story - a good story has all 7 parts and makes sense. I can write my story and think of more good ideas or million dollar words as I write.” Help students as much as they need to do this, but try to let them do as much as they can alone. Encourage them to use other self-statements of their choice while they write. If students do not finish writing today, they can continue at the next lesson.

____ **V. Graph Story Parts**

Have the student shade in the graph to equal the number of story parts they included – have the student determine- does his story have all 7 parts - then fill in graph. If the student misses a part, talk about how to revise the story and set a goal for next time.

____ **IV. Lesson Wrap-Up**

- H. Have the student put his work and charts in his folder.
- I. Remind the students that they will fill in the transfer chart again next time.
- J. Remind students of the POW + WWW, What=2, How=2 test again next time.

***Repeat this lesson until student can write a story independently.

APPENDIX B

Observer _____ School _____

Lesson Date _____ Teacher/Student _____

POW + WWW with transfer: Lesson #1 – Day 1

I. Introduce Strategies

- _____ A. Go over parts of POW
- _____ B. Practice POW
- _____ C. Discuss why POW is important

II. Discuss Good Stories

- _____ A. Give examples of what makes a story good
- _____ B. Discuss goals of good stories (fun to read and write, make sense, have 7 parts)

III. Introduce WWW

- _____ A. Give examples of each
- _____ B. Students generate examples

IV. Find WWW in a story

- _____ A. Review WWW
- _____ B. Find examples of WWW in the story
- _____ C. Model note taking on graphic organizer

V. Introduce What = 2

- _____ A. Discuss each WHAT
- _____ B. Give examples of each

VI. Introduce How = 2

- _____ A. Discuss each HOW
- _____ B. Give examples of each

VII. Find WHAT = 2 and HOW = 2 in a story

- _____ A. Review each WHAT and HOW
- _____ B. Find examples of each in story
- _____ C. Model note taking on graphic organizer

VIII. Practice Story Parts Reminder

- _____ A. Have students explain the parts of WWW WHAT = 2 HOW = 2 as a group

IX. Lesson Wrap Up

- _____ A. Announce test next session
- _____ B. Pack up folder

On a scale of 1-5, with 1=not evident, 3=adequate, to 5=done well

1. Teacher engages each student in discussion where indicated.

1-----2-----3-----4-----5

2. Each student responds to question and contributes to discussion.

1-----2-----3-----4-----5

3. Teacher modifies to student question, answers, and needs appropriately.

1-----2-----3-----4-----5

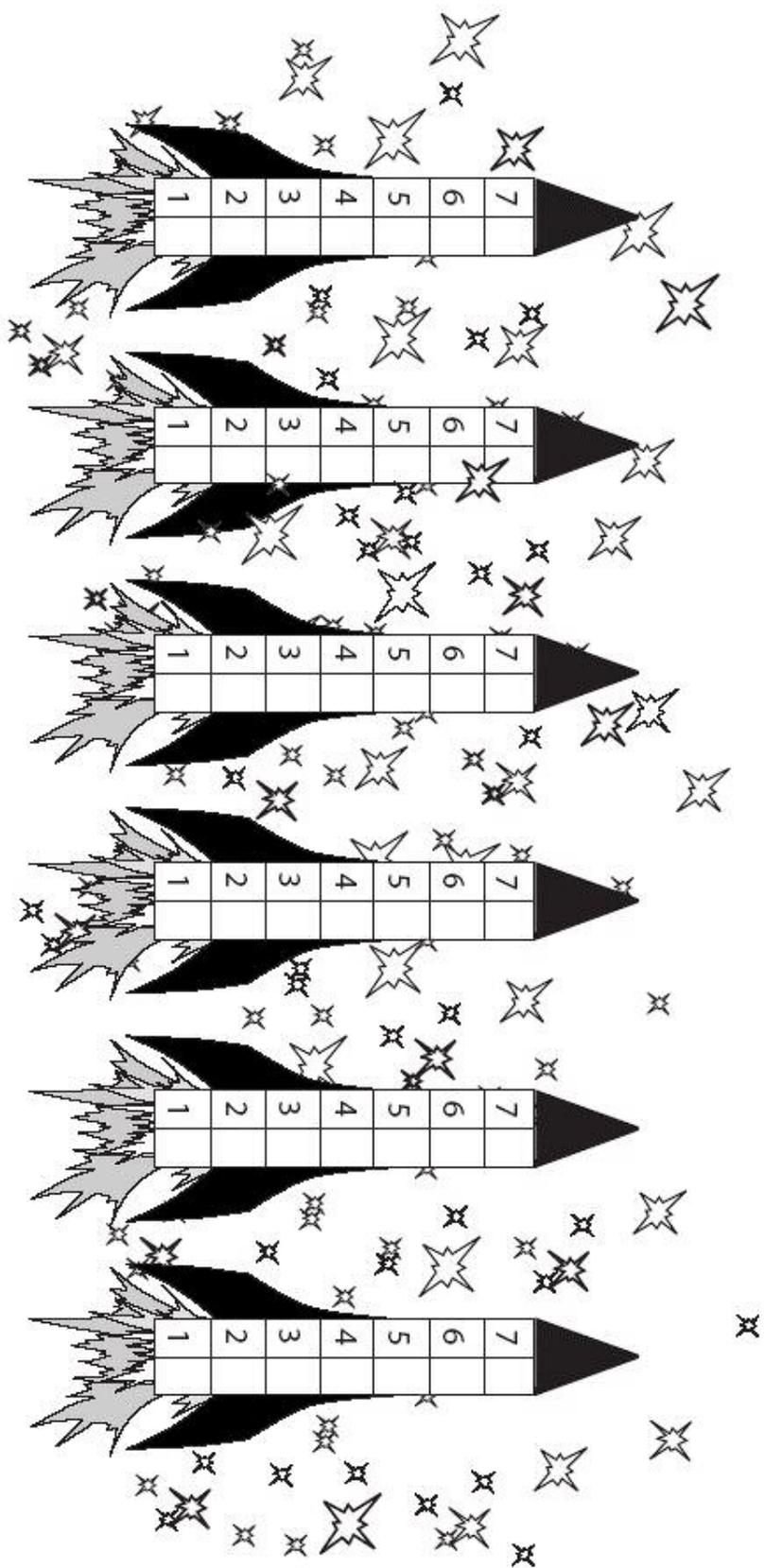
4. Teacher is well-prepared, positive, and makes smooth transitions.

1-----2-----3-----4-----5

5. Lesson pace is appropriate.

1-----2-----3-----4-----5

APPENDIX C



Story Rockets

APPENDIX D

APPENDIX E

Writing Efficacy and Attitude

Name: _____

Date: _____

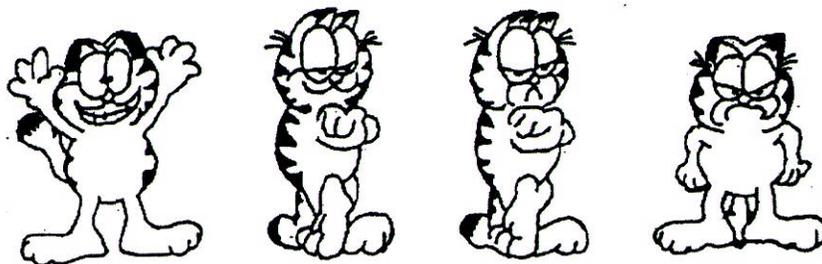
Pre or Posttest: _____

Score Efficacy: _____
(Sum Items: 1, 4, 6, 8, 10, 12 – scores for 6, 8, 12 need to be reversed first)

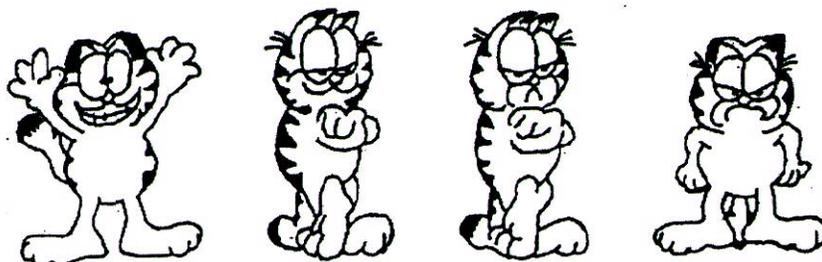
Score Attitude: _____
(Sum Items: 2,3,5,7,9,11 – scores for 1 and 7 need to be reversed first)

Name _____ Grade _____ Examiner _____

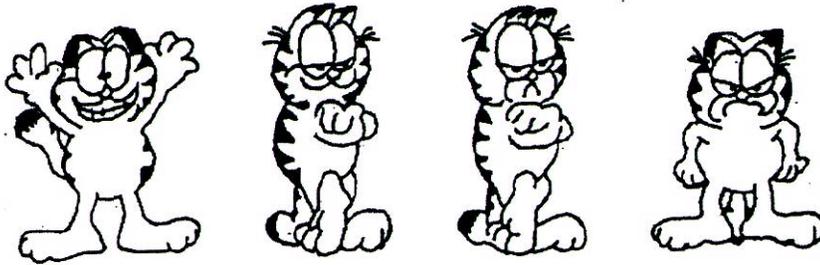
A. I am good at hopping up and down.



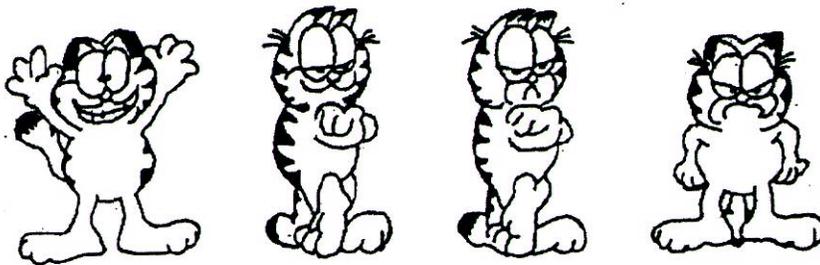
B. I am good at juggling 8 balls at the same time.



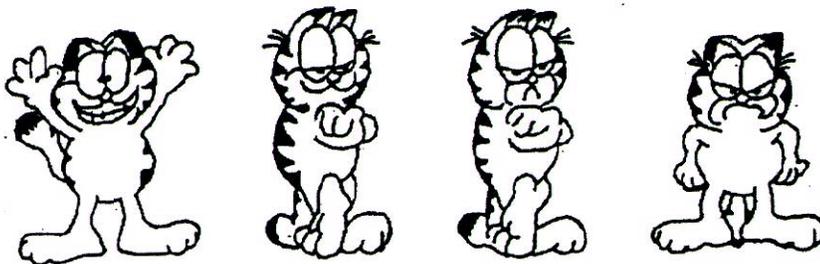
1. When I write, it is easy for me to get ideas for my paper.



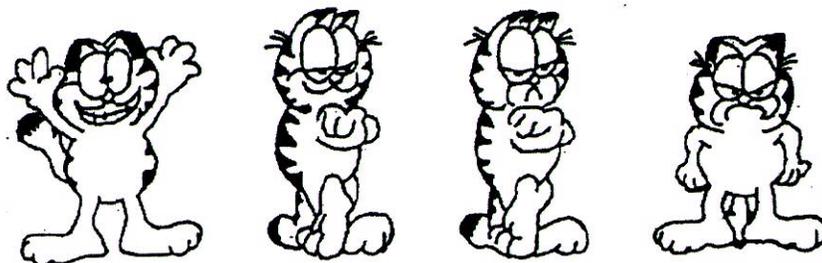
2. I would rather read than write.



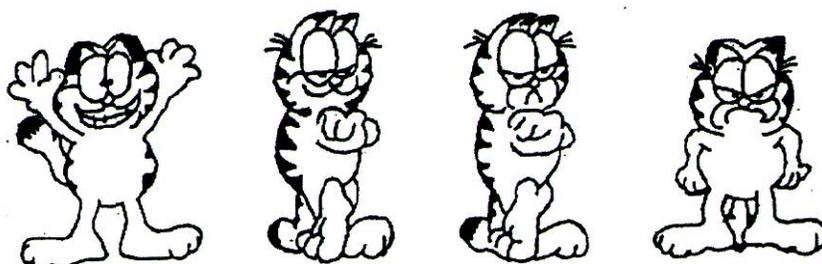
3. I do writing outside of school.



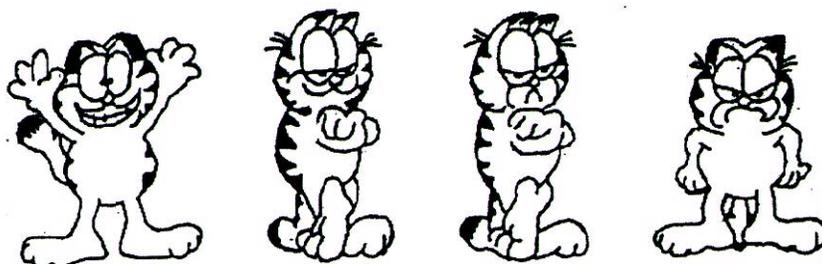
4. When my class is asked to write, my paper is one of the best.



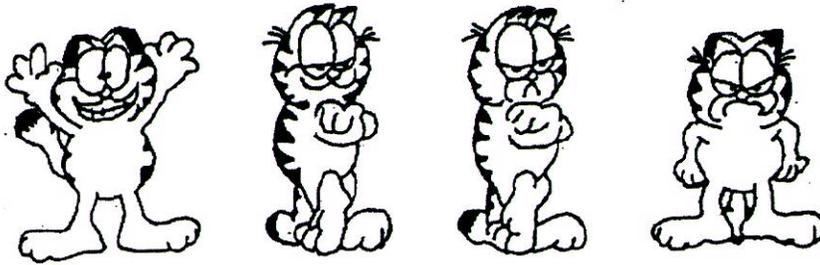
5. I would rather write than do math problems.



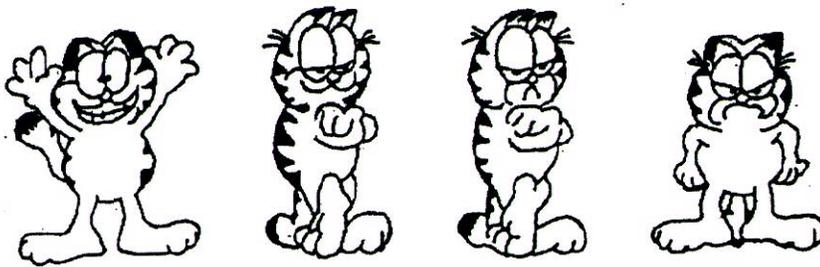
6. When writing a paper, it is hard for me to decide what goes first, second, third, and so on.



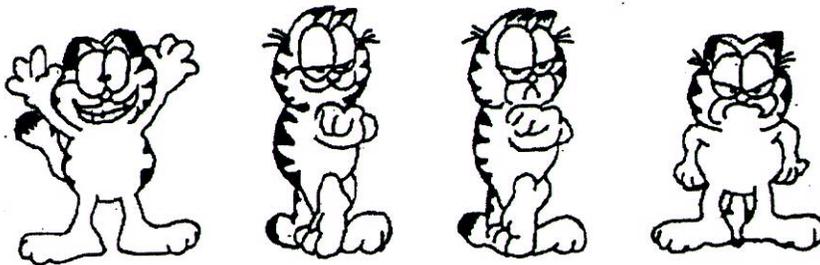
7. I do not like to write.



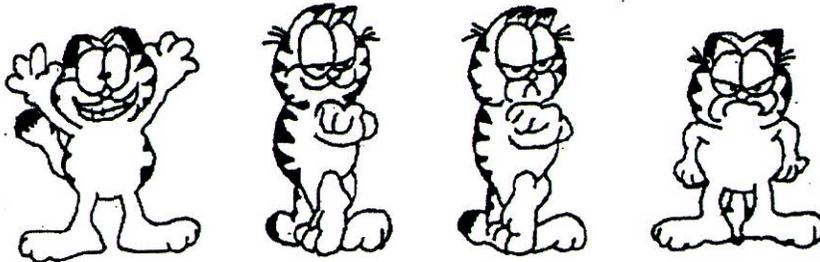
8. When writing a paper, I have trouble finding the right words for what I want to say.



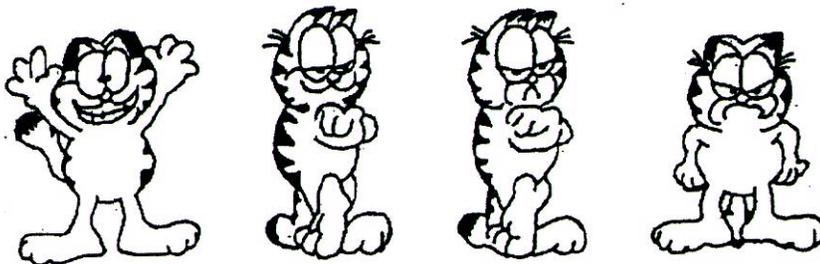
9. I like to have my classmates read what I have written.



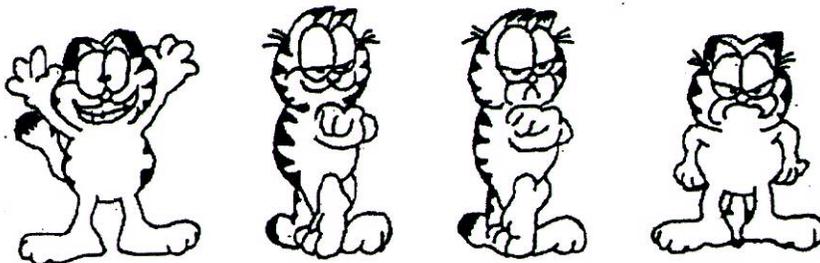
10. When I plan a paper, my plan is one of the best in my class.



11. I write whenever I can.



12. When writing a paper, it is hard for me to keep thinking of things to say.



APPENDIX F

Social Validity Questionnaire

I want you to think about what you have learned while working with me. This includes POW, the WWW strategy for writing stories, and your self-statements. I want you to tell me how you can use each one of these. Tell me as many places or activities where they can help you.

1. Where can you use POW? What can POW help you to do?
2. Where can you use WWW and what can WWW help you do?
3. Where and when can you use your self-statements? What can your self-statements help you to do?
4. If you were the teacher, would you teach POW and WWW to your students? Why or why not?
5. If you did teach POW and WWW to other students, what would you do the same?
6. What did you like, or not like, about POW?
7. What did you like, or not like, about WWW?
8. What did you like or not like about using the Rockets?
9. What did you like, or not like, about having self-statements?
10. Overall, did you think the POW and WWW strategies helped you to write better stories?

References

- Alexander, P. (1997). Mapping the multidimensional nature of domain learning: The interplay of cognitive, motivational, and strategic forces (pp. 213-250). In M. Maehr, P. Pintrich (Eds.) *Advances in motivation and achievement* (Vol. 10). Greenwich, CT: JAI Press.
- Alexander, P., Graham, S., & Harris, K.R. (1996). A perspective on strategy research: Process and prospects. *Educational Psychology Review*, 10, 129-154.
- Bandura, A., & Schunk, D. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41, 586-598.
- Bechtel, J. (1985). *Improving writing & learning: A handbook for teachers in every class*. Boston, MA: Allyn and Bacon.
- Beriter, C. & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.
- Bos, C.S., & Vaughn, S. (1998). *Teaching students with learning and behavior problems* (4th ed.). Needham Heights, MA: Allyn and Bacon.
- Bradley, R., & Monfore, D. M. (2004). A national perspective on children with emotional disorders. *Behavioral Disorders*, 29, 211-223.
- Brown, A., & Campione, J. (1981). Inducing flexible thinking: A problem of access. In M. Freidman, J., Das, and N. O'Connor (Eds.), *Intelligence and Learning* (pp 515-529). New York, Plenum.
- Callicott, K. J. & Park, H. (2003). Effects of self-talk on academic engagement and academic responding. *Behavioral Disorders*, 29, 48-64.

- Cancio, E. J., West, R. P., & Young, K. R. (2004). Improving mathematics homework completion and accuracy of students with ebd through self-management and parent participation. *Journal of Emotional and Behavioral Disorders, 12*, 9-22.
- Carr, S. C. & Punzo, R. P. (1993) The effects of self-monitoring of academic accuracy and productivity on the performance of students with behavioral disorders. *Behavioral Disorders, 18*, 241-250.
- Cullinan, D. (2002). *Students with emotional and behavior disorders: An introduction for teachers and other helping professionals*. Upper Saddle River, NJ: Merrill-Prentice Hall.
- Danoff, B., Harris, K.R., & Graham, S. (1993). Incorporating strategy instruction within the writing process in the regular classroom: Effects on the writing of students with and without learning disabilities. *Journal of Reading Behavior, 25*, 295-319.
- De La Paz, S., & Graham, S. (1997a). Effects of dictation and advanced planning instruction on the composing of students with writing and learning problems. *Journal of Educational Psychology, 89*, 203-222.
- Deshler, D.D., & Schumaker, J.B. (1986). Learning strategies: An instructional alternative for low-achieving adolescents. *Exceptional Children, 52*, 583-590.
- Dunlap, G. & Childs, K. E. (1996). Intervention research in emotional and behavioral disorders: An analysis of studies from 1980-1993. *Behavioral Disorders, 21*, 125-136.
- Epstein, M.H., Kinder, D. & Bursuck, B. (1989). The academic status of adolescents with behavioral disorders. *Behavioral Disorders, 14*, 157-165.

- Forness, S. R., & Kavale, K. A., (2000). Emotional or behavioral disorders: Background and current status of the EBD terminology and definition. *Behavioral Disorders*, 25, 264-269.
- Glomb, N. & West, R. P. (1990). Teaching behaviorally disordered adolescents to use self-management skills for improving the completeness, accuracy, and neatness of creative writing homework assignments. *Behavioral Disorders*, 15, 233-242.
- Graham, S. (1999). Handwriting and spelling instruction for students with learning disabilities: a review. *Learning Disability Quarterly*, 22, 78-98.
- Graham, S. (in press). Writing. In P. Alexander & P. Winne (Eds.), *Handbook of Educational Psychology*. Mahwah, NJ: Erlbaum.
- Graham, S., & Harris, K.R. (1989). Improving learning disabled students' skills at composing essays: Self-instructional strategy training. *Exceptional Children*, 56, 201-216.
- Graham, S., & Harris, K.R. (1994). The role and development of self-regulation in the writing process. In D. Schunk & B. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 203-228). Hillsdale, NJ: Erlbaum.
- Graham, S., & Harris, K.R. (1997). Self-regulation and writing: Where do we go from here? *Contemporary Educational Psychology*, 22, 102-114.
- Graham, S., & Harris, K.R. (2003). Students with learning disabilities and the process of writing: A meta-analysis of SRSD studies. In L. Swanson, K. Harris, & S. Graham, (Eds.), *Handbook of Learning Disabilities* (pp. 323-344). New York: Guilford Press

- Graham, S., & Harris, K.R. (2004). Improving the writing performance of young struggling writers: Theroretical and programmatic research from the center to accelerate student learning. (In Press).
- Graham, S., Harris, K.R., & Troia, G. (1998). Writing and self-regulation: Cases from the self-regulated strategy development model. In D. Schunk & B. Zimmerman (Eds.), *Self-regulated learning: From teaching ot self-reflective practice*. New York: Guilford.
- Graham, S., Harris, K.R. (1999). Assessment and intervention in overcoming writing difficulties: An illustration from the self-regulated strategy development model. *Language, Speech, and Hearing Services in Schools, 30*, 255-264.
- Graham, S., Harris, K.R., & Reid, R. (1992). Developing self-regulated learners. *Focus on Exceptional Cildren, 24*(6), 1-16.
- Graham, S., Harris, K.R., & Zito, J. (2004). Promoting internal and external validity: A synergism of laboratory-like experiments and classroom-based self-regulated strategy development research. To appear in: G. Phye, D. Robinson, & J. Levin (Eds.), *Experimental Methods for Educational Intervention*, San Diego, CA: +Elvieser.
- Graham, S., MacArthur, C., Schwartz, S., & Page-Voth, V. (1992). Improving the compositions of students with learning disabilities using a strategy involving product and process goal setting. *Exceptional Children, 58*, 322-334.
- Graham, S., Schwartz, S., & MacArthur, C. (1993). Knowledge of writing and the composing process, attitude toward writing, and self-efficacy for students with and without learning disabilities. *Journal of Learning Disabilities, 26*, 237-249.

- Graham, S., Harris, K. R., Fink-Chorzempa, B., & MacArthur, C. (2003). Primary grade teachers' instructional adaptations for struggling writers: A national survey. *Journal of Educational Psychology, 95*, 279-292.
- Gresham, F.M., MacMillan, D.L., Beebe-Frankenberger, M.E., & Bacian, K.M. (2000). Treatment integrity in learning disabilities intervention research: Do we really know how treatments are implemented? *Learning Disabilities Research & Practice, 15*, 198-205.
- Gunter, P. L. (2003, February). Effective instruction for students with behavior disorders: Current issues, challenges, and compromises. Keynote address at the Midwest Symposium for Leadership in Behavior Disorders, Kansas City, MO.
- Gunter, P. L. & Denny, R. K. (1998). Trends and issues in research regarding academic instruction of students with emotional and behavioral disorders. *Behavioral Disorders, 24*, 44-50.
- Hallahan, J. L., & Kauffman, J.M. (1984). *Exceptional children* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hammill, D., & Larsen, S. (1996). *Test of Written Language – 3*. Austin, TX: Pro-Ed.
- Harris, K.R. (1982). Cognitive-behavior modification: Application with exceptional students. *Focus on Exceptional Children, 15*, 1-16.
- Harris, K. R. (1990). Developing self-regulated learners: The role of private speech and self-instructions. *Educational Psychologist, 25*, 35-50.
- Harris, K.R., & Graham, S. (1996). Making the writing process work: Strategies for composition and self-regulation. Cambridge, MA: Brookline.

- Harris, K.R., & Graham, S. (1999). Programmatic intervention research: Illustrations from the evolution of self-regulated strategy development. *Learning Disability Quarterly, 22*, 251-262.
- Harris, K.R., Graham, S., & Mason, L.H. (2003). Self-regulated strategy development in the classroom: Part of a balanced approach to writing instruction for students with disabilities. *Focus On Exceptional Children, 35*, 1-16.
- Harris, K.R., Graham, S., & Mason, L.H. (2004). *Improving the Writing Performance, Knowledge, and Motivation of Struggling Writers in Second Grade: The Effects of Self-Regulated Strategy Development*. Manuscript submitted for publication.
- Harris, K.R., Graham, S., Mason, L. H., & Saddler, B. (2002). Developing self-regulated writers. *Theory Into Practice, 41*, 110-115.
- Harris, K.R., Reid, R., & Graham, S. (2004). Self-regulation among students with LD and ADHD. In (Eds.) *Learning about Learning Disabilities (3rd Ed.)* (pp. 167-195). :Academic Press
- Hayes, J. (1996). A new framework for understanding cognition and affect in writing. In M. Levy & S. Randell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1-27). Mahwah, NJ: Erlbaum.
- Hayes, J. & Flower, L. (1980). Identifying the organization of writing processes. In L. Gregg & E. Steinberg (Eds.) *Cognitive processes in writing* (pp. 3-30). Hillsdale, NJ: Erlbaum.
- Hayes, J. & Flower, L. (1986). Writing research and the writer. *American Psychologist, 41*, 1106-1113.

- Hughes, C. A., Ruhl, K. L., & Misra, A. (1989). Self-management with behaviorally disordered students in school settings: A promise unfulfilled? *Behavioral Disorders, 14*, 250-262.
- Issac, S., & Michael, W. B. (1995). *Handbook in Research and Evaluation* (3rd ed.). San Diego, CA: Educational and Industrial Testing Services.
- Johns, B.H., Crowley, E.P., & Guetzloe, E. (2002). *Effective curriculum for students with emotional and behavioral disorders*. Denver, Colorado: Love.
- Jones, V.F., Dohrn, E., Dunn, C. (2004). *Creating effective programs for students with emotional and behavioral disorders: Interdisciplinary approaches for adding meaning and hope to behavior change interventions*. Boston, MA: Pearson, Allyn, and Bacon.
- Kauffman, J. M. (1992). *Characteristics of behavior disorders of children and youth* (5th ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Kauffman, J. M. (1997). *Characteristics of emotional and behavioral disorders of children and youth* (6th ed.). New Jersey: Prentice-Hall, Inc.
- Kauffman, J. M. (2001). *Characteristics of emotional and behavioral disorders of children and youth* (6th ed.). New Jersey: Prentice-Hall, Inc.
- Kauffman, J.M., & Wong, K.L.H. (1991). Effective teachers of students with behavioral disorders: Are generic teaching skills enough? *Behavioral Disorders, 16*, 225-237.
- Kirk, S. A., & Gallagher, J. J. (1989). *Educating exceptional children* (6th ed.). Boston: Houghton Mifflin.
- Lane, L. L. (2004). *Academic instruction and tutoring interventions for students with*

emotional and behavioral disorders: 1990 to the present. In R.B. Rutherford, M.M. Magee, & S.R. Mathur (Eds.), *Handbook of Research in Emotional and Behavioral Disorders* (pp. 462-486). New York: The Guilford Press.

Lane, K. L., Beebe-Frankenberger, M. E., Lambros, K. M., & Pierson, M. (2001).

Designing effective interventions for children at-risk for antisocial behavior: An integrated model of components necessary for making valid inferences. *Psychology in the Schools, 38*, 365-379.

Langone, J., Levine, B., Clees, T. J., Malone, M., & Koorland, M. (1996). The differential effects of a typing tutor and microcomputer-based word processing on the writing samples of elementary students with behavioral disorders. *Journal of Research on Computing in Education, 29*, 141-158.

Levendoski, L. S. & Cartledge, G. (2000). Self-monitoring for elementary school children with serious emotional disturbances: Classroom applications for increased academic responding. *Behavioral Disorders, 25*, 211-224.

MacArthur, C. A. & Graham, S. (1987). Learning disabled students' composing with three methods: Handwriting, dictation, and word processing. *Journal of Special Education, 21*, 22-42.

MacArthur, C. A. & Graham, S. (1993). Integrating strategy instruction and word processing into a process approach to writing instruction. *School Psychology Review, 22*, 671-682.

MacArthur, C.A., Graham, S., Schwartz, S.S., & Schafer, W.D. (1995). Evaluation of a writing instruction model that integrated a process approach, strategy instruction, and word processing. *Learning Disability Quarterly, 18*, 278-291.

- Malmgren, K. W. (in press). Interventions in language arts for students with behavioral disorders: A review of literature.
- Meichenbaum, D. (1977). *Cognitive behavior modification: An integrative approach*. New York: Plenum Press.
- Mooney, P., Denny, R. K., & Gunter, P. L. (2004). The impact of nclb and the reauthorization of idea on academic instruction of students with emotional or behavioral disorders. *Behavioral Disorders, 29*, 237-246.
- Mooney, P., Epstein, M. H., Reid, R., & Nelson, J. R. (2003). Status and trends in academic intervention research for students with emotional disturbance. *Remedial and Special Education, 24*, 273-287.
- National Commission on Writing (2003). *The neglected "R."* College Entrance Examination Board.
- Nelson, J. R., Benner, G. J., Lane, K., & Smith, B. W. (2004). Academic achievement of k-12 students with emotional and behavioral disorders. *Exceptional Children, 71*, 59-73.
- Nelson, J. R., Smith, D. J., Young, R. K., & Dodd, J. M. (1991). A review of self-management outcome research conducted with students who exhibit behavioral disorders. *Behavioral Disorders, 16*, 169-179.
- No Child Left Behind Act of 2001. Pub I. No. 107-110 Stat 1425 (2002).
- Pierce, W. D., & Epling, W. F. (1995). The applied importance of research on the matching law. *Journal of Applied Behavioral Analysis., 28*, 237-241.
- Pressley, M., Harris, K. R., & Marks, M. (1992). But good strategy instructors are constructivists! *Educational Psychology Review, 4*, 3-31.

- Reid, R. Gonzalez, J.E., Nordness, P.D., Trout, A, & Epstein, M.H. (2004). A meta-analysis of the academic status of students with emotional/behavioral disturbance. *The Journal of Special Education, 38*, 130-143.
- Ruhl, K. L. & Berlinghoff, D. H. (1992). Research on improving behaviorally disordered students' academic performance: A review of literature. *Behavioral Disorders, 17*, 178-190.
- Sawyer, R. J., Graham, S., & Harris, K. R. (1992). Direct teaching, strategy instruction, and strategy instruction with explicit self-regulation: Effects on the composition skills and self-efficacy of students with learning disabilities. *Journal of Educational Psychology, 84*, 340-352.
- Scheuermann, B., & Johns, B. (2002). Advocacy for students with emotional and behavioral disorders in the 21st century. *Behavioral Disorders, 28*, 57-69.
- Schloss, P. J., Harriman, N. E., & Pfefier, K. (1985, November). Application of sequential prompt reduction technique to the independent composition performance of behaviorally disordered youth. *Behavioral Disorders, 17*-25.
- Schunk, D. H. (2003). Self efficacy for reading and writing: Influence of modeling, goal setting, and self-evaluation. *Reading & Writing Quarterly, 19*, 159-172.
- Schunk, D.H., & Zimmerman, B.J. (1997). Social origins of self-regulatory competence. *Educational Psychologist, 32*, 195-208.
- Scruggs, T. E., & Mastropieri, M. A. (1986, May). Academic characteristics of behaviorally disordered and learning disabled students. *Behavioral Disorders, 184*-190.

- Skiba, R. & Casey, A. (1985, August). Interventions for behaviorally disordered students: A quantitative review and methodological critique. *Behavioral Disorders*, 239-252.
- Swanson, H. L., Harris, K. R., & Graham, S. (2003). *Overview of Foundations, Causes, Instruction, and Methodology in the Field*. In Swanson, H. L., Harris, K. R., & Graham, S. (Eds.). *Handbook of Learning Disabilities* (pp. 3-15). New York: The Guilford Press.
- Tawny, J.W. & Gast, D.L. (1984). Introduction. *Single Subject Research in Special Education*. (pp. 2-11). Columbus, Ohio: Merrill Publishing Co.
- Trout, A. L., Nordness, P. D., Pierce, C. D., & Epstein, M. H. (2003). Research on the academic status of children with emotional and behavioral disorders: A review of the literature from 1961 to 2000. *Journal of Emotional and Behavioral Disorders*, 11, 198-210.
- Vygotsky, L. (1978). *Mind in society: the development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wagner, M., Kutash, K., Duchnowski, J., & Epstein, M. H. (2005). The special education elementary longitudinal study and the national longitudinal transition study: Study designs and implications for children and youth with emotional disturbance. *Journal of Emotional and Behavioral Disorders*, 13, 25-41.
- Wehby, J.H., Symons, F., & Shores, R.E. (1995). A descriptive analysis of aggressive behavior in classrooms for students with emotional and behavioral disorders. *Behavioral Disorders*, 20, 87-105.

- Wehby, J. H., Lane, K. L., & Falk, K. B. (2003). Academic instruction for students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders, 11*, 194-197.
- Wong, B.Y.L., Harris, K.R., Graham, S. & Butler, D.L. (2003). Cognitive strategies instruction research in learning disabilities. In L. Swanson, K. Harris, & S, Graham, (Eds.), *Handbook of Learning Disabilities* (pp. 383-402). New York: Guilford Press.
- Ysseldyke, J. & Nelson, J. R. (2004). What we know and need to know about the consequences of high-stakes testing for students with disabilities. *Exceptional Children, 71*, 75-94.
- Zimmerman, B.J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*, 329-339.
- Zimmerman, B. J. (2004). Dimensions of Academic Self-Regulation: A conceptual framework for education. In Schunk, D. H. & Zimmerman, B.J. (Eds.), *Self Regulation of Learning and Performance* (pp. 3-21). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Zimmerman, B. J., & Reiserberg. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology, 22*, 73-101.